MAGAZINE OF BUILDING

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54

February 1952

house+home

edition

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NAHB convention report (p. 32)

Editorial Cut-backs, copper, confusion—and NPA (p. 65)

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New Levitt houses Why the public would rather buy than rent (p. 98)

The expandable house Is it worth the trouble? (p. 118)

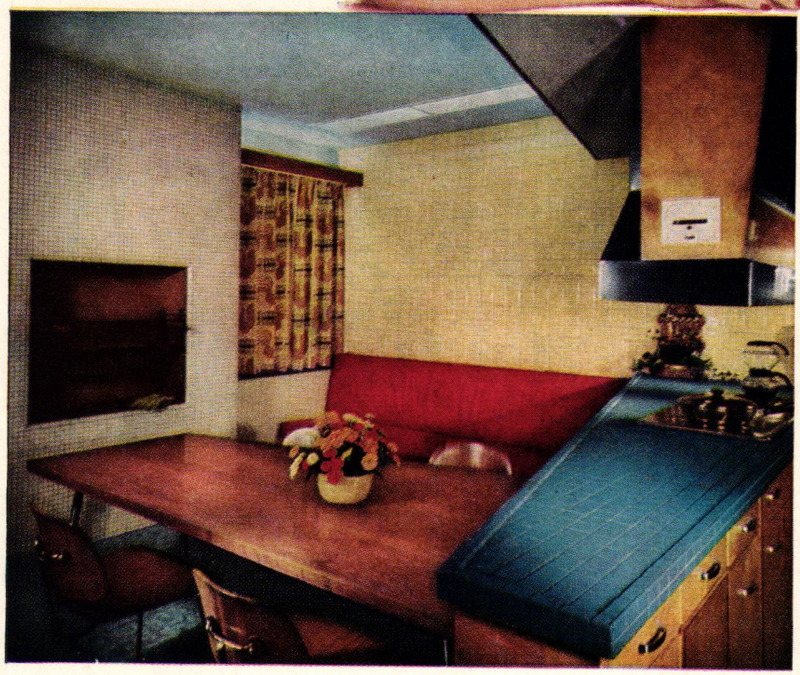
Tax advice 53 ways not to waste money on March 15 (p. 106)

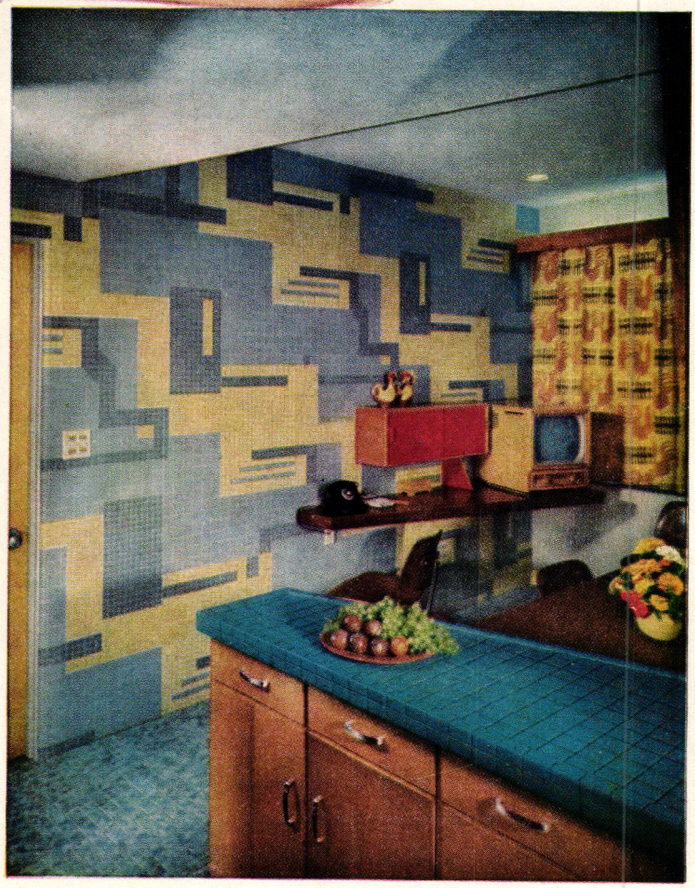
Cost analysis for builders An accurate system that corrects itself (p. 116)



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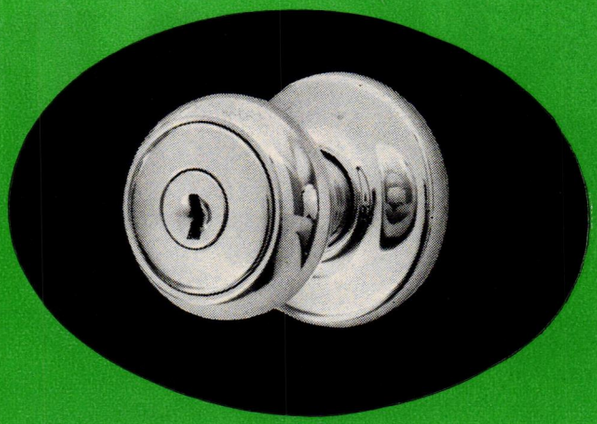


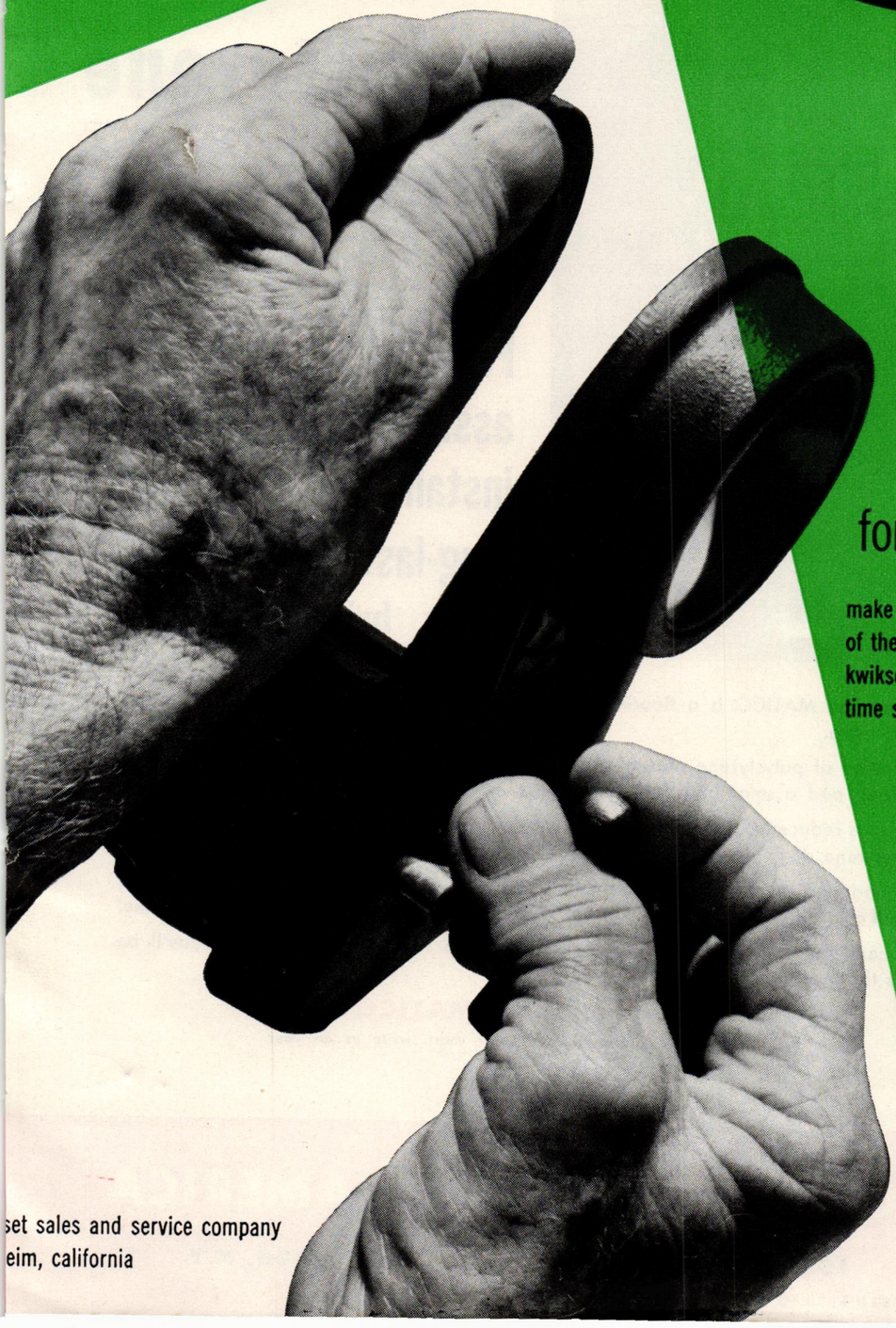
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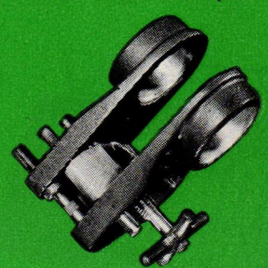
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THE MAGAZINE OF BUILDING

house+home edition

February, 1952

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Cover: Apartment house, Raphael Soriano, Architect; Photo by Julius Shulman

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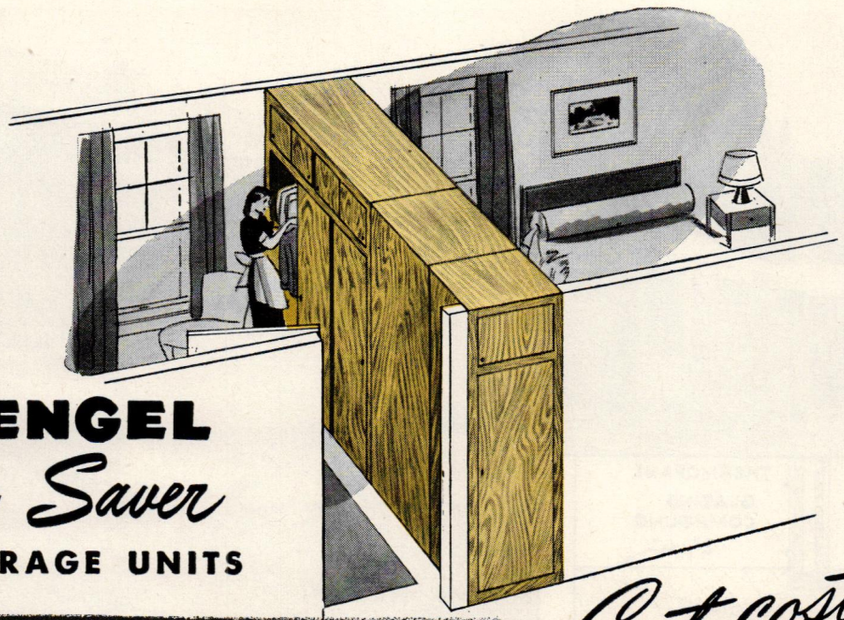
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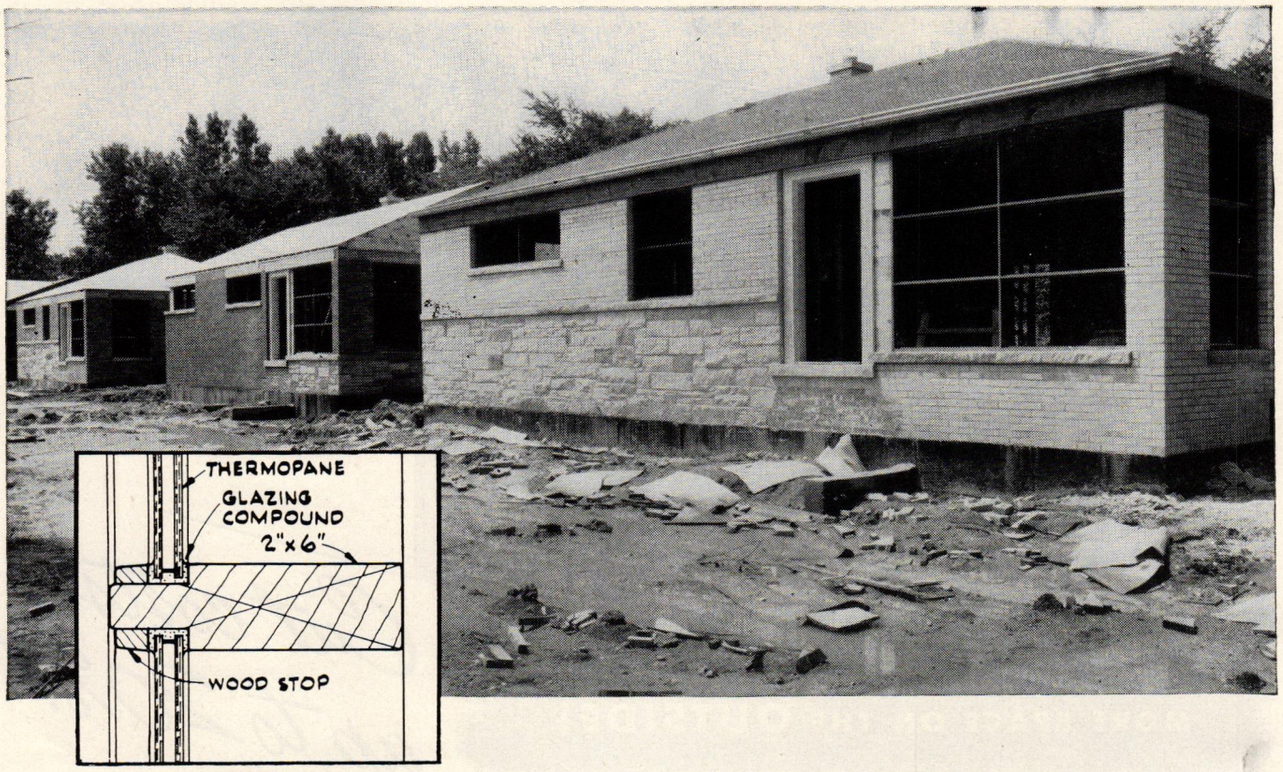
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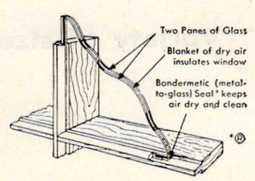
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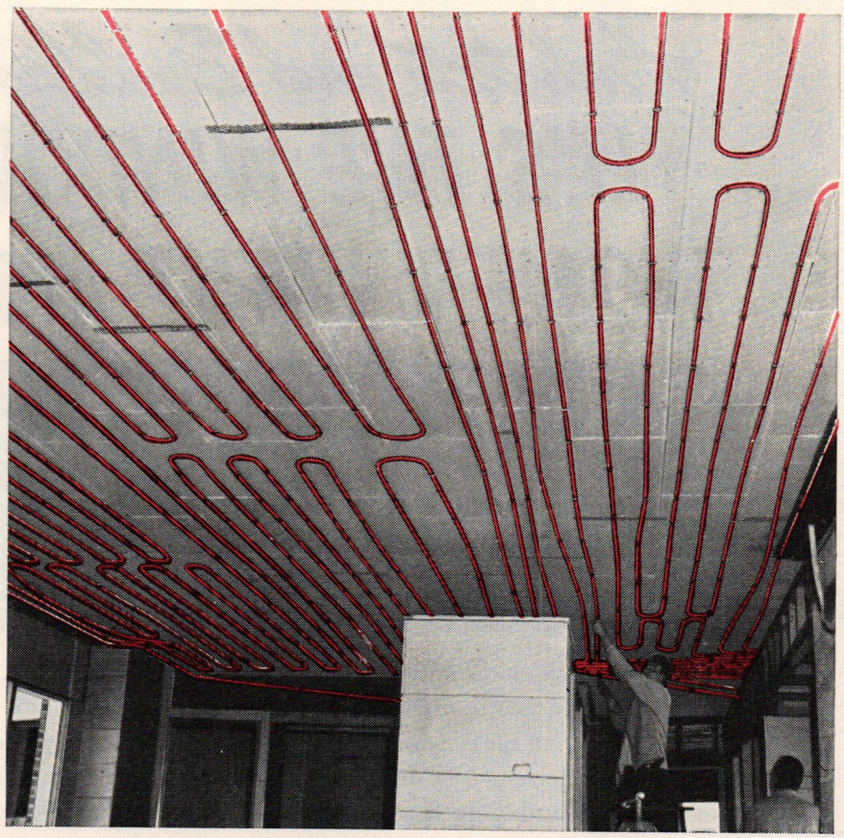
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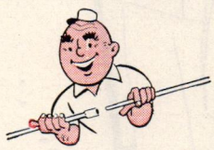
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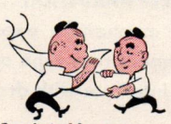


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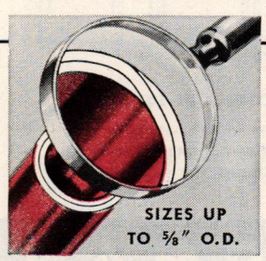
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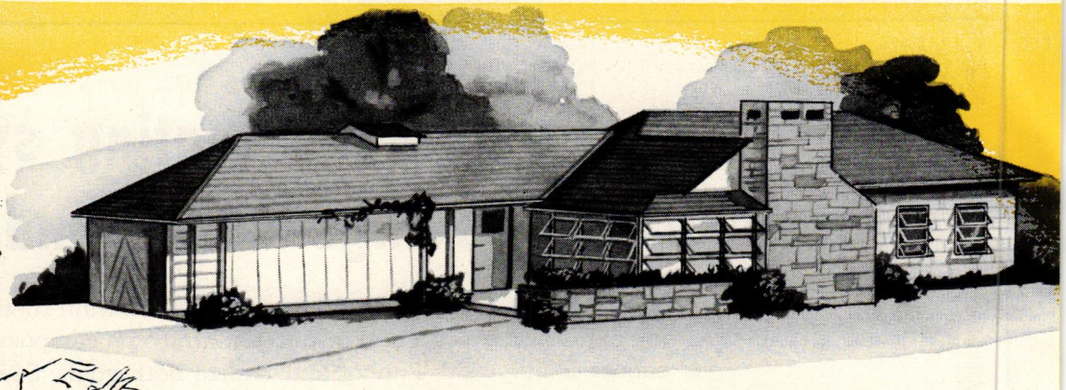
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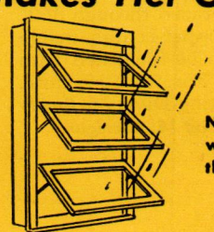
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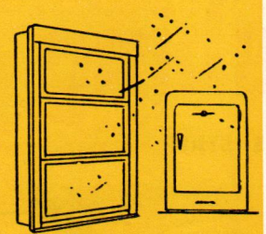
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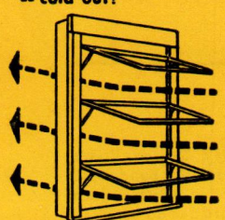
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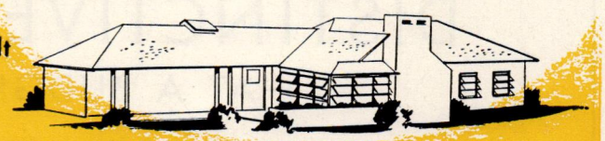
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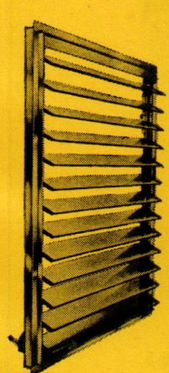
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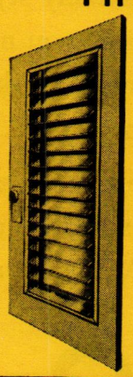
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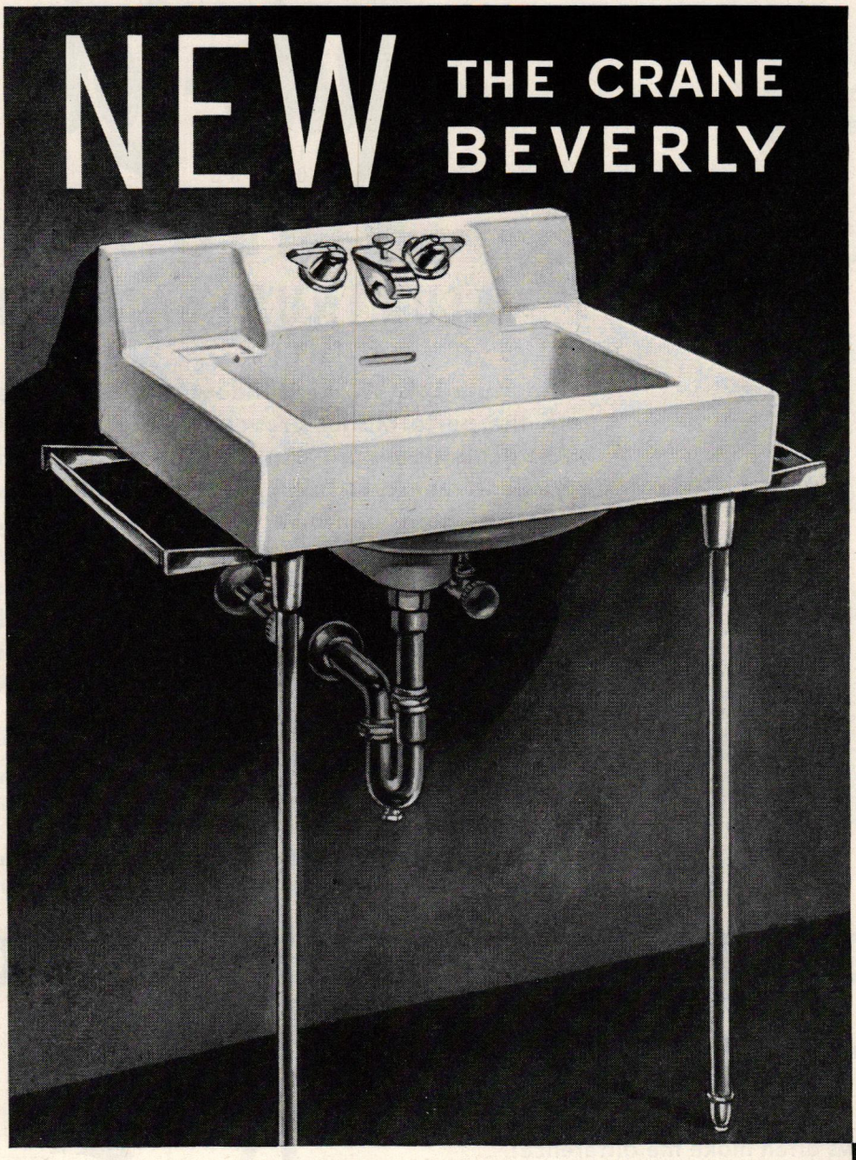
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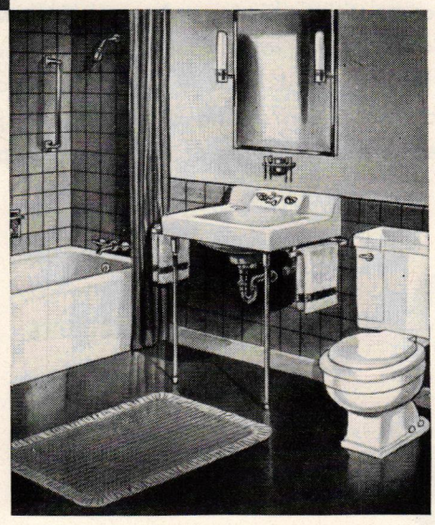
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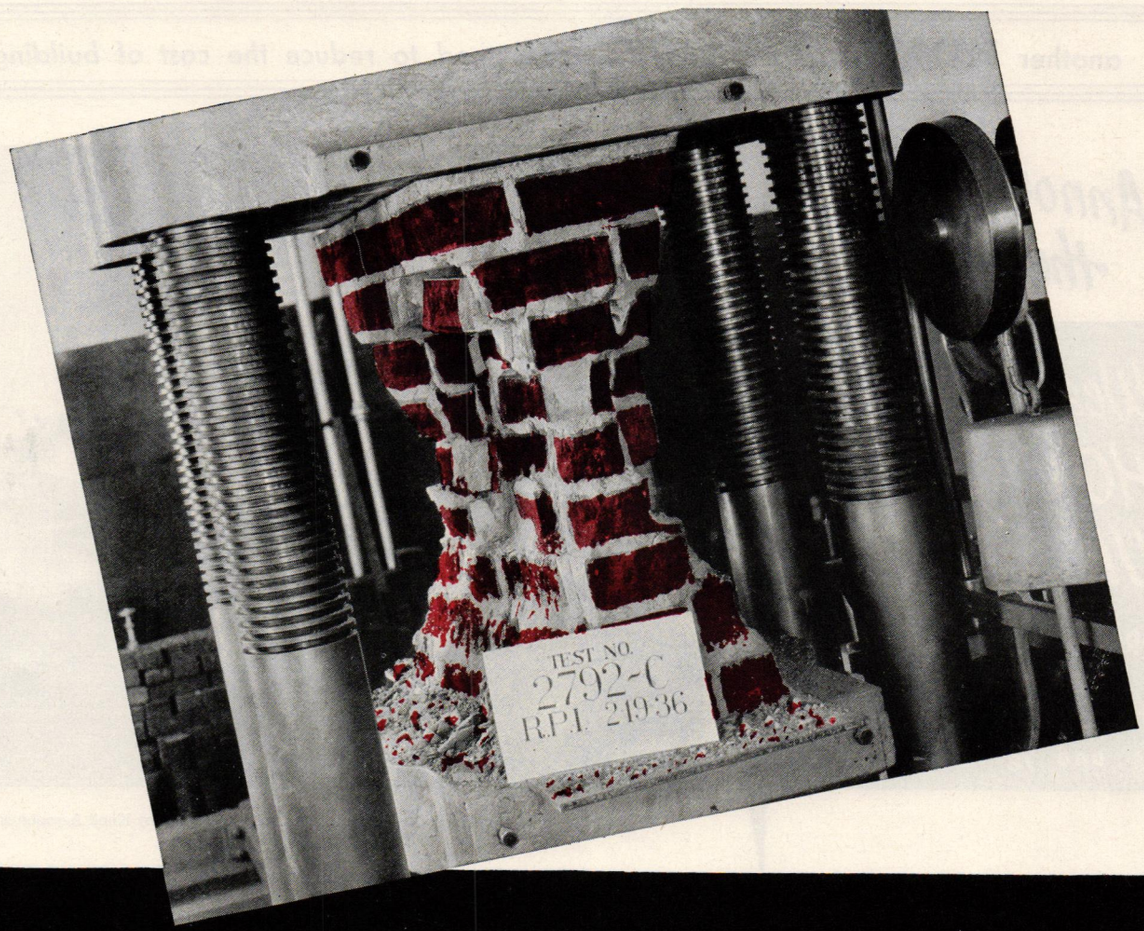


You'll want to remember this compact, distinctively styled lavatory. You'll want to consider it the next time you meet a problem where space is limited and cost must be kept low—but where quality and style are deciding factors . . . .

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PLUMBING AND HEATING



BRIXMENT

assures stronger walls!

BRIXMENT exceeds the strength requirements for masonry cement (both Type I and II) of the American Society for Testing Materials' Specification C91-49 and the Federal Specification SS-C-181b. Type II is usually specified when high strength is required.

When Brixment mortar is tested in compression between two brick, at 28 days or later periods, the brick usually crack before the mortar fails.

The strength of piers laid with Brixment mortar approaches the strength of piers laid with straight portland cement mortar.



LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY

another **HOMASOTE FIRST** — *designed to reduce the cost of building*

Announcing the NEW!

Weatherproof HOMASOTE UNDERLAYMENT

Specifically designed for use under WALL-TO-WALL CARPETING and 1/8" LINOLEUM

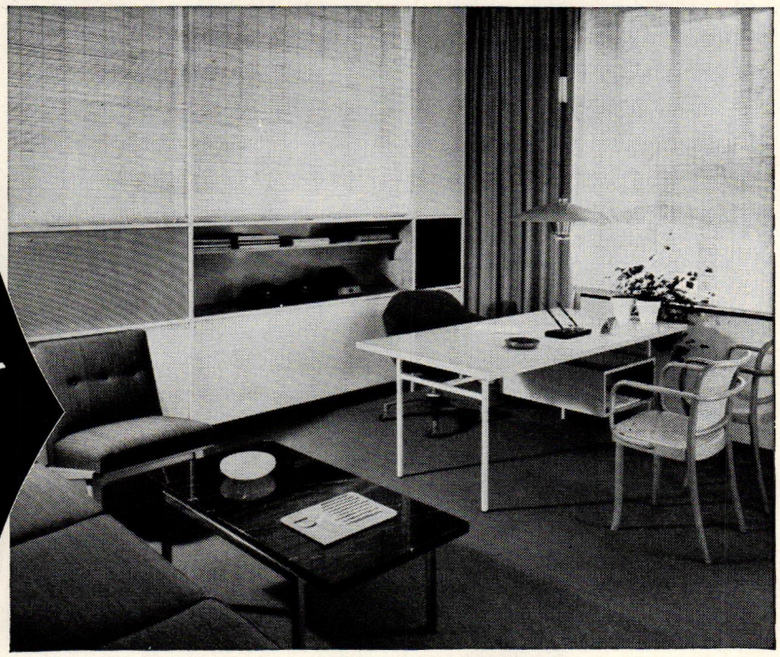


Photo by G. Barrows—Executive Office for INTERIORS designed by Knoll Associates, Inc.

• Greater resilience and longer life for the floor covering—a substantial saving in cost—these are the gains you get with this revolutionary new product.

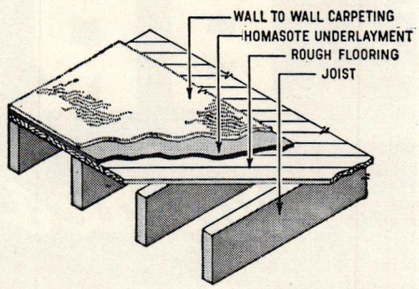
Homasote Underlayment — integrally waterproofed throughout—is nailed directly to the rough flooring. The pieces—normally 4' x 6'—are simply butted together; they require no joining.

When used with 1/8" linoleum, the linoleum is cemented directly to the Underlayment; no felt is required. This saves the cost of both the felt and one cementing operation. When used with wall-to-wall carpeting, no pad is needed under the carpeting, saving both material and labor.

Along with a major improvement in floor-covering method, you save 1/3 to 1/2 the cost of the materials usually used for 5/8" underlayment. (The 5/8" Underlayment brings the floor covering up to the normal height for 25/32" hardwood flooring.)

For combination awning and storm shutters—Florida tested—here are the ideal thickness and strength in a low cost material that is *completely weatherproof*. In Big Sheets—up to 8' x 14'—you have the perfect answer for protecting store windows and fronts.

Let us send you samples and full details. *Please give us the name of your lumber dealer!*



Nova Sales Co.—a wholly owned Homasote subsidiary—distributes the Nova Roller Door, Nova-I. P. C Waterproofing Products, Nova Sidewalls and the Nova Loc-Nail. *Write for literature.*

HOMASOTE COMPANY
TRENTON 3, N. J.

SEE OUR CATALOG IN SWEET'S

—makers of the oldest and strongest insulating-building board on the market

Homasote Company, Trenton 3, N. J. Dept. 76
Send samples and full details on Homasote Underlayment.

NAME.....

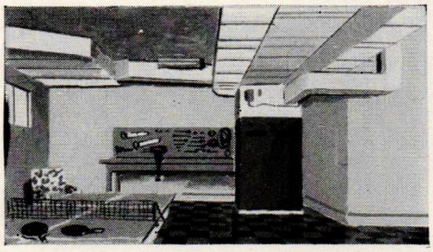
ADDRESS.....

CITY & ZONE.....STATE.....

My lumber dealer is.....

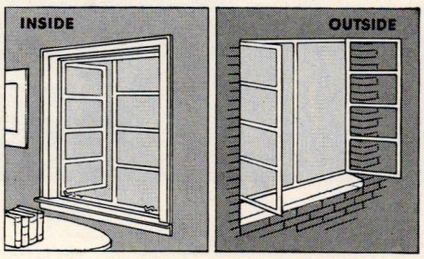
Architectural Service

Better Ductwork



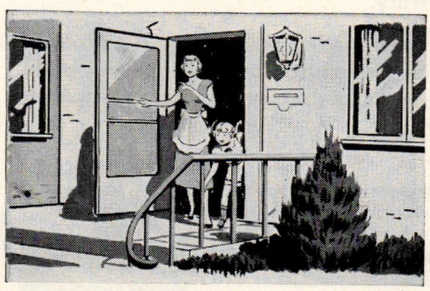
A fast-moving trend to aluminum for heating, ventilating, and air conditioning ducts will soon make it the accepted material standard. Aluminum makes neater installations—an important factor in such places as game rooms. Rust problems are eliminated in laundry areas or wherever moisture is a consideration. Finished costs for aluminum ductwork are comparable to those with less permanent materials because lightweight aluminum is easier to handle, fabricate and install. For completely satisfied clients specify aluminum ductwork.

Window Sills and Stools

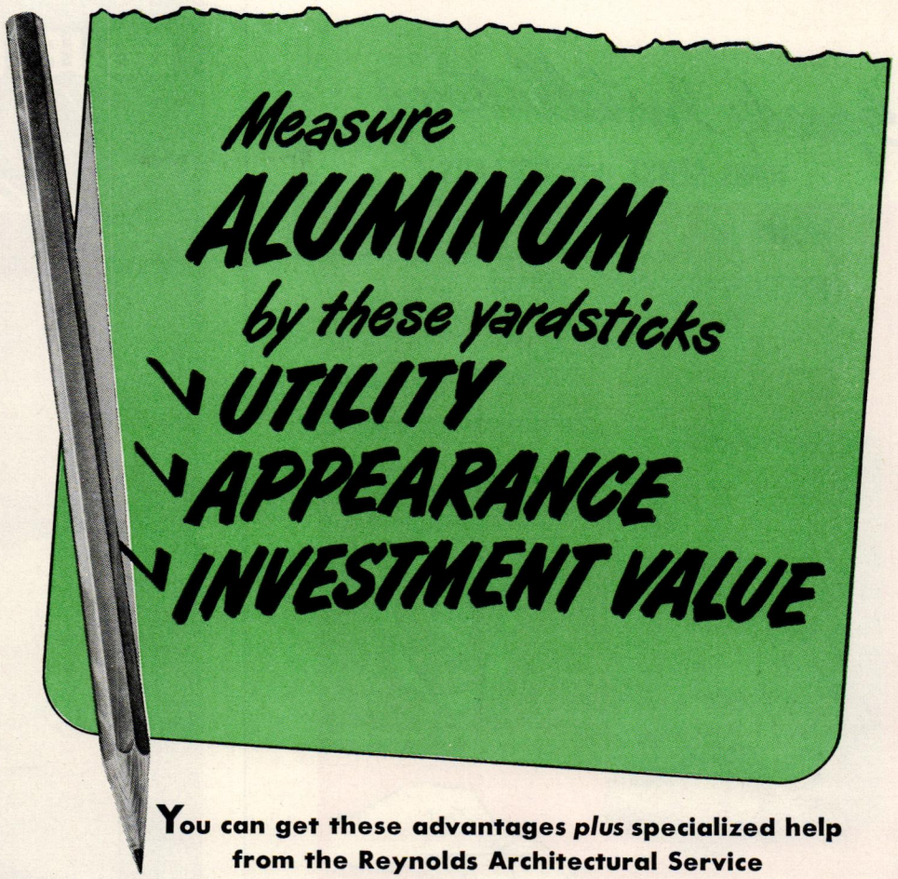


Durable aluminum alloy extrusions are the modern answer to the home-builders demand for the finest in window trim. These sills and stools, designed to take hard wear, eliminate maintenance, rust and rotting problems. This window trim stays bright and new-looking after years of service. Easy to install with regular tools, these Reynolds Aluminum window sills and stools fit right in with modern aluminum windows.

Storm-Screen Doors



Combination storm-and-screen doors of naturally attractive aluminum are approved by FHA for private dwellings. There are many good brands made of Reynolds Aluminum on the market today. Remember, in new buildings, or in remodeling, specify *aluminum*. The slight extra cost pays for itself in longer life and reduced maintenance expense. *(Advertisement)*



You can get these advantages *plus* specialized help from the Reynolds Architectural Service

Memo to Contractors and their Architects: When planning your next job, regardless of type or style, stop and ask yourself this question—what other building material offers the complete list of advantages that you find in aluminum?

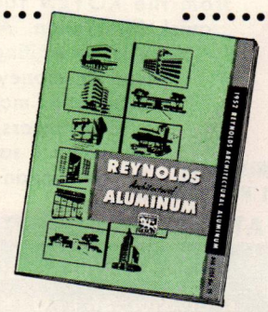
Check these advantages of this light, modern metal. Unlimited design flexibility . . . light weight with great strength (more metal per pound with comparable strength factors) . . . natural attractiveness . . . rust and corrosion resistance . . . easy to work with regular tools . . . wide range of finishes. All these points mean aluminum is the ideal material for your specifications.

Even though the supply of aluminum for building purposes is limited at the present time, enlarging production facilities assure an increased supply in the future. Also, remember that the valuable assistance of the Reynolds Architectural Service is available to your architect at any time for the asking.

This service is always ready to help provide an efficient and economical solution to your design problems. For more complete information, call the Reynolds sales office or distributor listed under "Aluminum" in your classified telephone directory.

NEW FREE CATALOG!

Send for your free copy of the new 1952 catalog on Reynolds Architectural Aluminum—AIA File No. 15. Helpful, 3-color presentation of the materials Reynolds offers in the architectural aluminum field. Tells the complete story of Reynolds Aluminum and the advantages for architectural purposes. Covers design and fabrication, lists various types of finishes, shows applications and installation details. Illustrates decorative sheet—embossed and perforated. Gives sample short form specification, alloys most commonly used, etc., plus a complete list of helpful technical literature. Send your request on business letterhead to Reynolds Metals Co., 2528 S. Third St., Louisville 1, Ky.



REYNOLDS METALS

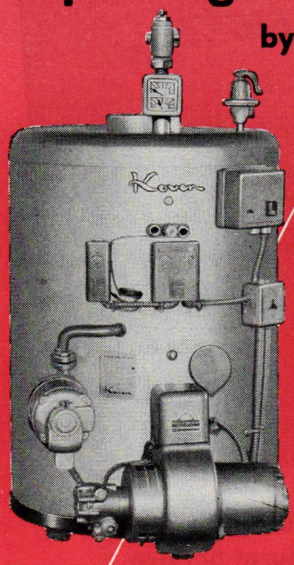
REYNOLDS ALUMINUM

MODERN DESIGN HAS ALUMINUM IN MIND

Speedy Installation

TURNS SENSE INTO DOLLARS

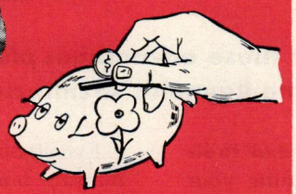
with a VENKO packaged unit by Koven



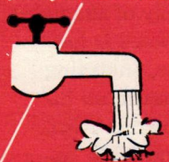
A COMPLETE PACKAGE—
Fully wired and equipped for quick installation—no lost time



Compact and beautiful
Occupies the smallest space



Two sensitive aquastats—plenty of hot water



Low cost heat and hot water
Fuel bills down—savings up

"Sure, VENKO makes MONEY for me because it makes SENSE to my CUSTOMERS"



"Today—people want lots of quick low-cost heat and hot water. Well, VENKO enables *me* to fill that bill.

Customers don't want to be bothered with expensive repairs. But KOVEN engineers took care of that with tested, selected controls and two sensitive aquastats that really avoid heat and hot water troubles.

And most important — VENKO comes fully wired and assembled from the KOVEN factory for quick installation. And when there is no waiting time—it saves me money. Speedy installation makes sense to customers, too. And when I say speedy —I mean speedy."

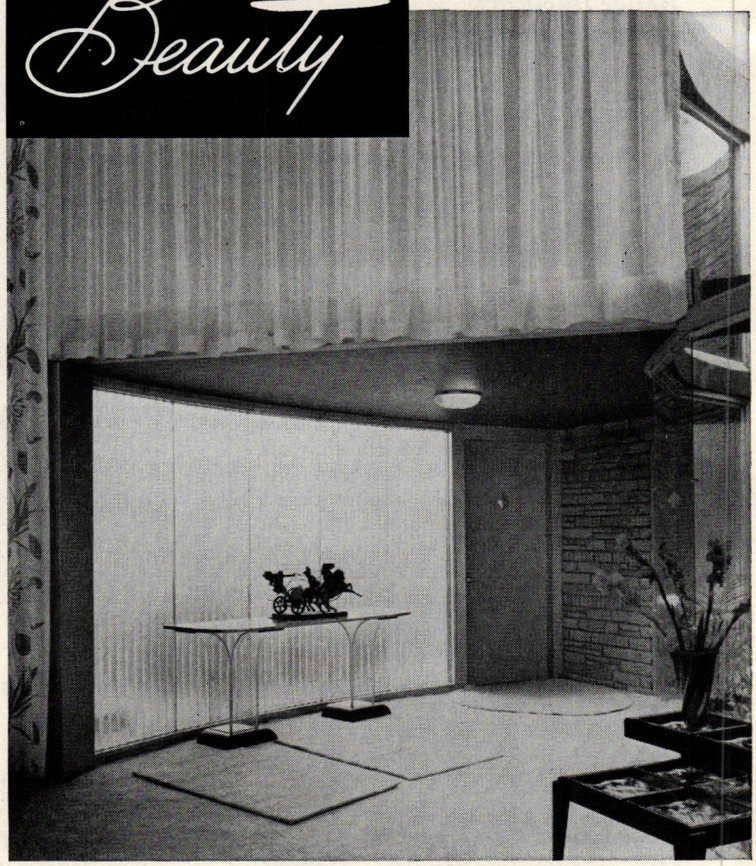


BUILT TO FIT THE MODERN HOME.

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a division of L. O. KOVEN & BRO., INC.
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Plants: Jersey City, N. J. • Dover, N. J.

DOUBLE DUTY *Beauty*

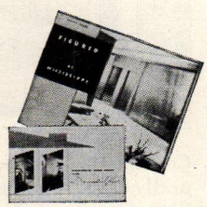


The rhythmic, translucent pattern of Structural Corrugated Glass constitutes a new and dramatic decorating medium that offers the architect a wider scope for his talents. Note how a feeling of leisurely living and gracious hospitality has been achieved in the foyer of this distinctive home. Yet, the same partition viewed from outside, creates an exterior of unusually high interest.

Structural Corrugated Glass by Mississippi is translucent without being transparent. It floods interiors with softened light that flatters furnishings, yet completely safeguards privacy.

Make light an integral part of your decorating schemes. Specify Mississippi Glass. Available in a wide variety of beautiful and unusual patterns wherever quality glass is sold.

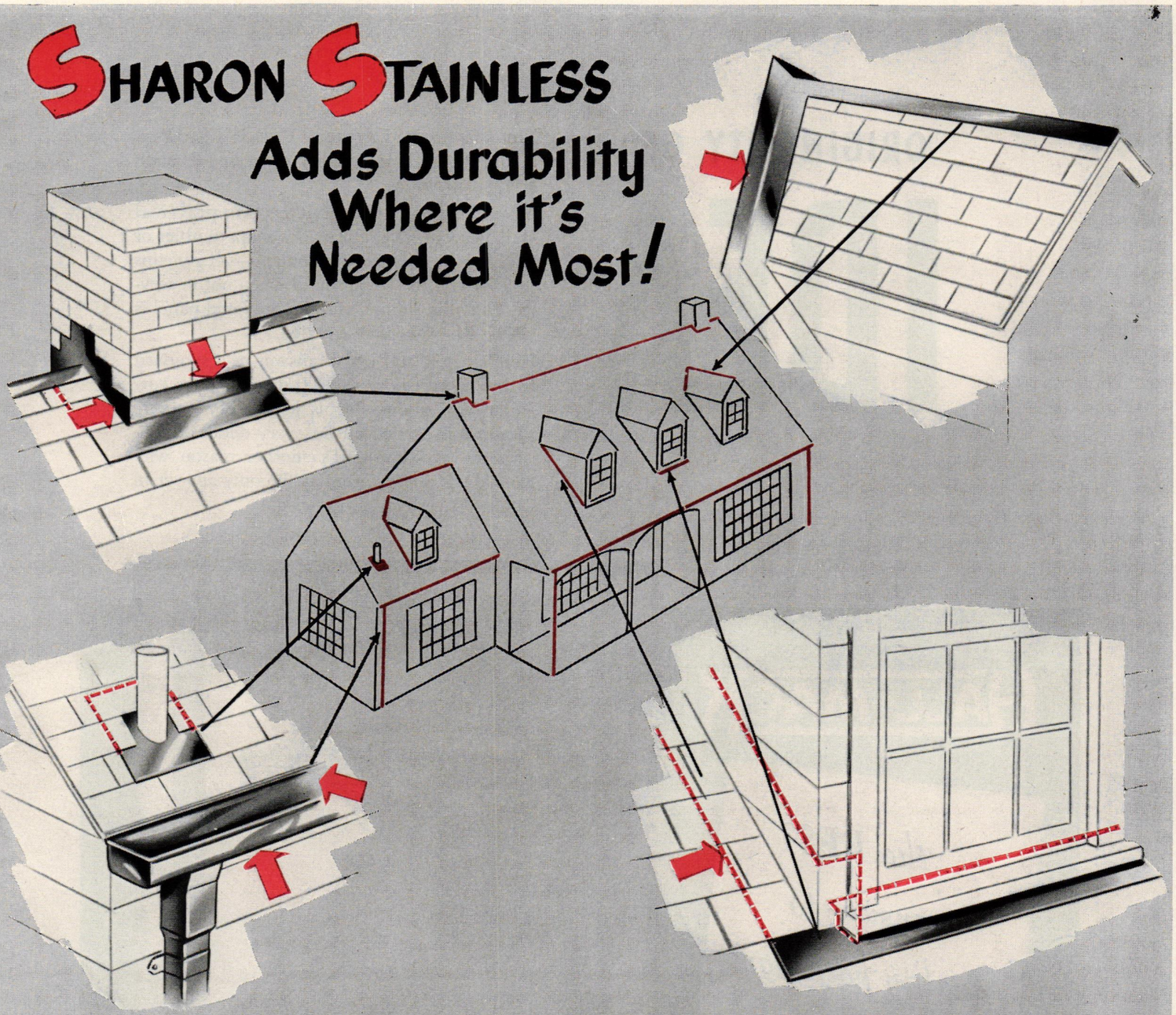
Write today for new free booklets, "Modernize Your Home With Decorative Glass" and "Figured Glass by Mississippi." Photographs of actual installations. Many ideas on ways to use this exciting new medium.



MISSISSIPPI *Glass* COMPANY
88 ANGELICA ST. SAINT LOUIS 7, MO.
NEW YORK • CHICAGO • FULLERTON, CALIF.
WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

SHARON STAINLESS

Adds Durability Where it's Needed Most!



Architects and builders have long been concerned over the "critical areas" — the valleys, ridges, flashing, and gutters that fail under the normal attacks of the weather. The use of stainless steel in these areas has proved to be a desirable improvement. Stainless strongly resists rust and corrosion, making it ideal for ocean front or industrial areas. Stainless has an extremely low coefficient of expansion — tight joints stay tight. There is no excess "working" due to temperature changes. And, stainless has a natural beauty that needs no paint — yet it can be painted where desired.

Stainless is stronger — enables fabricators to use lighter gauges, and fabricate larger sections right in their own shops. This same unique combination of qualities that makes stainless so desirable for peace-time uses makes this precious steel much in demand for defense purposes. At present our distribution is dictated by essential needs. In the future we will fill your need for stainless steel.

STAINLESS STAYS NEW FOREVER

SHARON STEEL CORPORATION

Sharon, Pennsylvania

SHARONSTEEL

DISTRICT SALES OFFICES: Chicago, Ill., Cincinnati, O., Dayton, O., Detroit, Mich., Indianapolis, Ind., Milwaukee, Wis., New York, N. Y., Philadelphia, Penna., Rochester, N. Y., Los Angeles, Calif., San Francisco, Calif., Montreal, Que., Toronto, Ont.

ORIGINALITY OF IDEA

THIS CONCEALED LAVATORY UNIT is a good example of Hall-Mack quality expressed through originality of idea.

Like the good servant it is, this practical Hall-Mack accessory provides soap, tumbler or toothbrush at fingertip command—yet remains tastefully in the background when not in service. Only the shining chromium plated panel is visible when the unit is closed.

Here's a new and better answer to a standard bathroom accessory need. It demonstrates how Hall-Mack quality begins with a better basic idea and is carried out in every detail of construction and finish. It's another reason why Hall-Mack is recognized as the only answer in Quality Bathroom Accessories!

HALL-MACK

...the BEST answer to quality bathroom accessories



YOU BUILD A BATHROOM for a lifetime of use. Make sure you build with Hall-Mack's lasting quality and style. Within four popular lines—Crystalcrome, Coronado, Tempo and China-Vogue—you can select Hall-Mack accessories for every bathroom style and budget!

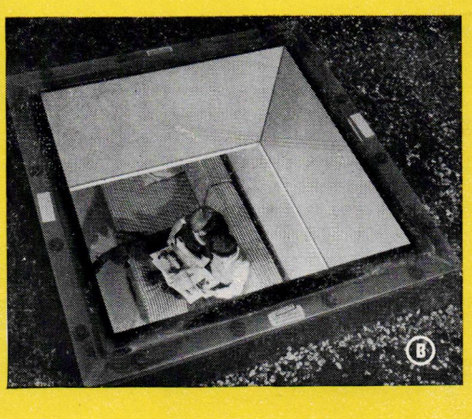
HALL-MACK® Quality ACCESSORIES For Every Bathroom Style and Budget

HALL-MACK COMPANY

1344 W. Washington Blvd., Los Angeles 7, California

7455 Exchange Ave., Chicago 49, Illinois

"More functional layout..."
...with Wascolite Skydomes...







An abundance of daylight is transmitted by Wascolite Skydomes to A —Central hallway (and dining room seen through curtain) B—the living room.

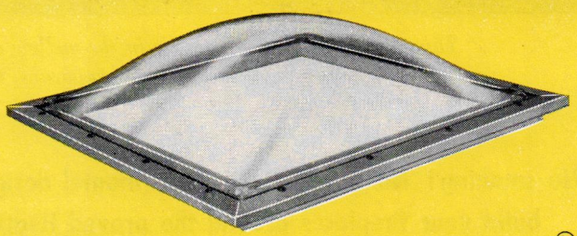


Prefabricated Wascolite Skydomes are installed in minutes . . . are weather-proof, shatter-resistant and maintenance-free . . . come in three basic shapes and with clear colorless or white translucent acrylic domes.

. . . Says architect E. D. Schaible, Jr., of Lafayette, Indiana, who has used Skydomes in his new home pictured here. "I had a free hand in designing the living room and dining room because Wascolite Skydomes eliminated the problem of daylighting the inside area. As a result, I believe I've got a more functional layout."

Architects and builders throughout the country are discovering that Wascolite Skydomes fill a great need for daylighting the inner core . . . the *heart* of the home. More compact, space-saving layouts . . . therefore more salable and cheaper to construct . . . usually result. Don't handicap yourself any longer by trying to get along with perimeter daylighting alone; write *today* for full information on Skydomes.

WASCO FLASHING COMPANY 88 FAWCETT ST.



Wascolite Skydomes®
PATENT PENDING

"Daylight The Heart Of The Home"

CAMBRIDGE 38, MASS.

Specify America's



This charming corner fireplace in the mellow atmosphere of an Early American room is built around the famous Heatilator unit. Whether traditional or contemporary, the Heatilator Fireplace allows complete freedom of architectural expression.

No smoking! No grief! No limit to mantel design when you build your fireplaces around the proved Heatilator unit

You'll never get complaints about your fireplaces when you build them around the famous Heatilator* Fireplace unit. It is a scientifically designed steel form that standardizes and simplifies construction of an open fireplace. In one compact unit it provides all vital parts of the fireplace from floor to chimney flue—including the firebox, damper, downdraft shelf and smoke dome. Only the decorative masonry is needed to complete the installation.

Assures correct operation . . . The Heatilator unit gives you a fireplace that will draw properly and will not smoke, because it is factory-engineered in accordance with established and proved principles of fireplace design. It saves architectural time ordinarily needed for detailing the masonry, and for close supervision during construction.

No limit to mantel design . . . Since the unit is practically hidden in the masonry, it puts no restriction on mantel design or use of materials. And it provides a big exciting selling point that adds less to the cost of the house than any other important feature.

Leading Fireplace !



Hidden in the masonry, the Heatilator unit puts no limit on mantel design or choice of materials. Only the grilles, blending into the decorative theme, give evidence of the improved construction.

Circulates heat . . . The Heatilator unit brings new heating efficiency to the open fireplace. Air is drawn from floor level into the double-walled firebox where it is heated, then circulated to every corner of the room. Ideal for southern homes, summer camps and basement rooms.

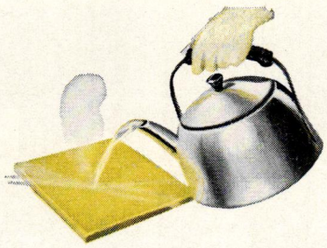
Tested and proved . . . Heatilator Fireplaces have been tested and proven in thousands of homes for 25 years. More are now in use than all other fireplace units put together. Avoid grief and get better fireplaces. Specify a *genuine* Heatilator unit —the name your clients know and respect! Heatilator, Inc., 312 E. Brighton Ave., Syracuse 5, N.Y. *Heatilator is the reg. T. M. of Heatilator, Inc.

HEATILATOR FIREPLACE

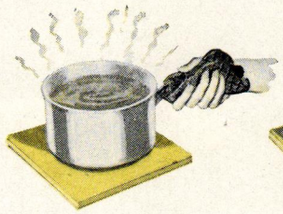
The heart of every modern home



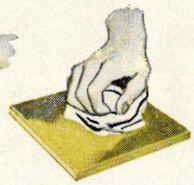
TILE IS STAINPROOF



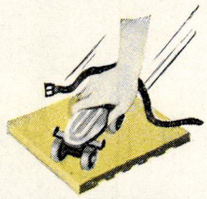
TILE IS WATERPROOF



TILE IS FIREPROOF



TILE CLEANS LIKE CHINA



TILE DEFIES SCRATCHING



ONLY GENUINE CLAY tile DEFIES ALL SIX!

When you specify Genuine Clay Tile in any installation, you immediately gain two things: (a) a permanent answer to your wall and floor surfacing problems, and (b) substantial long-range economies in maintenance. Consider, too, clay tile's known ability to resist heat, moisture, scratching, fading and staining. Genuine Clay Tile cleans as easily as a china dish and commands respect wherever it is used. Have you considered the use of clay tile lately in the kitchen, utility room, foyer, powder room or recreation room? It is worth a fresh appraisal every time you build or design any type of building. And remember, whether it is for modern or traditional styling, clay tile is one of the most flexible materials you can use in achieving distinctive patterns and color schemes.

Tile Council of America, Room 3401, 10 East 40th St., New York 16, N.Y. or Room 433, 727 W. Seventh St., Los Angeles, Calif.

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Architectural Tiling Company, Inc.
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THE MODERN STYLE IS CLAY TILE

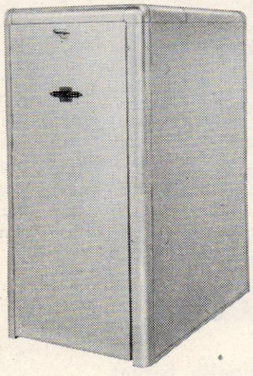
119 DELCO-HEAT units installed in new building project!



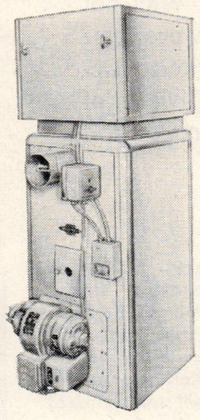


Section of the Oakridge development at Natick, Mass., built by Sumner D. Hersey, Inc., Realtors

"When planning the Oakridge development here in Natick, Massachusetts, we wanted the best heating system obtainable," writes Sumner D. Hersey, President of Sumner D. Hersey, Inc., Realtors. "After carefully considering several makes, we decided on General Motors Delco-Heat, and had 119 Delco-Heat Model SS Steam Boilers installed. The buyers of our homes are all more than satisfied with their Delco-Heat heating systems—and with the excellent service that has been given by Coan Brothers, Natick, Delco-Heat Distributor, who made the Oakridge installation." Francis Coan, at left, and Joseph Coan, at right, are pictured above with Mr. Hersey.



Delco-Heat oil-fired steel boiler is perfectly suited for radiant heating systems—or conventional steam or hot water systems—in popular size homes. A tankless hot water coil is included as standard equipment. The location of the burner, gauges and controls on the front of the unit makes it ideal for installation in restricted areas or utility rooms. Available in round or cabinet-type jacket. Net rating, 300′ of steam or 480′ of hot water radiation.



Delco-Heat Reverse Flow Conditionair – a vertical type, oil-fired forced warm air furnace, specially designed for "perimeter" and "radial" heating systems. This is the ideal unit for low-cost warm air installations in homes without basements, where space is limited. Capacity: 75,000 Btu per hour output. Other models to 200,000 Btu per hour output.

Mr. Hersey's 25 years of building experience has proved to him that Delco-Heat adds prestige and sales appeal to the new homes he builds. In Delco-Heat he gets top quality heating equipment at costs well within his budget for each house. And he knows, whether building 2, 20 or 200 homes, that General Motors manufacturing skill and engineering experience insure his buyers years of trouble-free operation.

Get all the facts about Delco-Heat units now. Learn about their complete flexibility, which helps solve many building problems. And remember—there is a gas or oil-fired Delco-Heat unit for any size house—any type heating system.

CLIP AND MAIL TODAY!

DELCO APPLIANCE DIVISION, Dept. MB
General Motors Corp., Rochester 1, N. Y.

Please send me complete details and specifications on all Delco-Heat units.

*Name*_____

*Address*_____

*City*_____ *Zone*____ *State*_____

For a good deal DEAL WITH DELCO

GENERAL MOTORS DELCO-HEAT

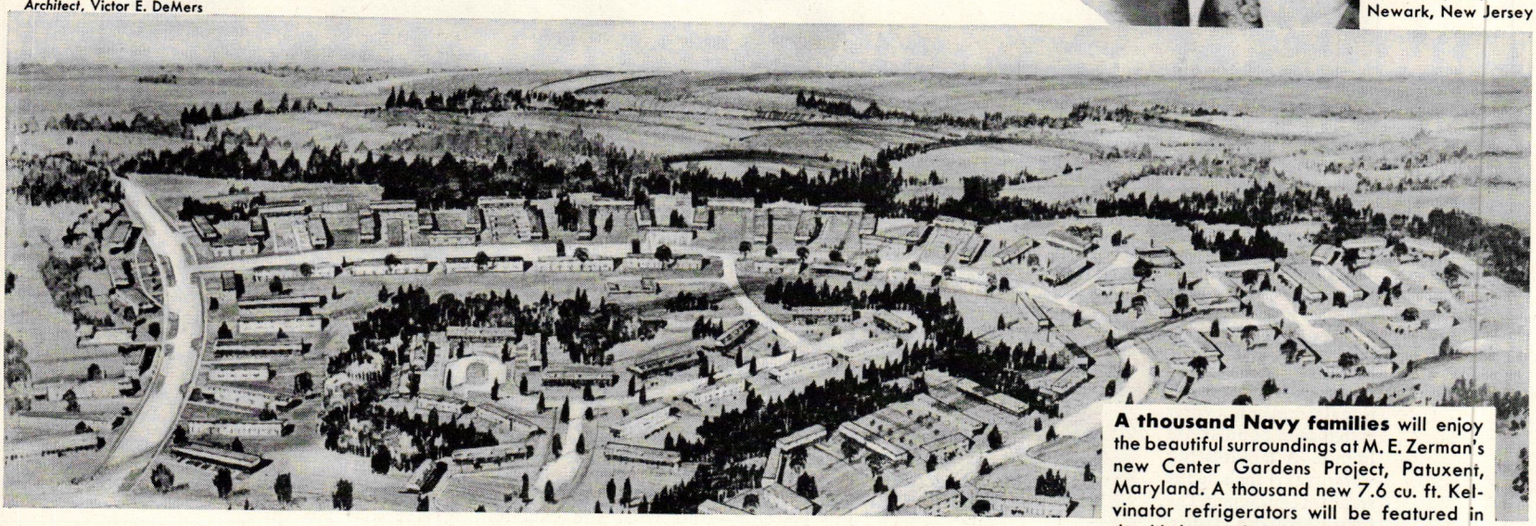
Take it from this SUCCESSFUL *builder!*

Who Again Chooses Refrigerators by the Oldest Maker ... Kelvinator



Milton E. Zerman
President,
Eagle Construction Co., Inc.,
Newark, New Jersey

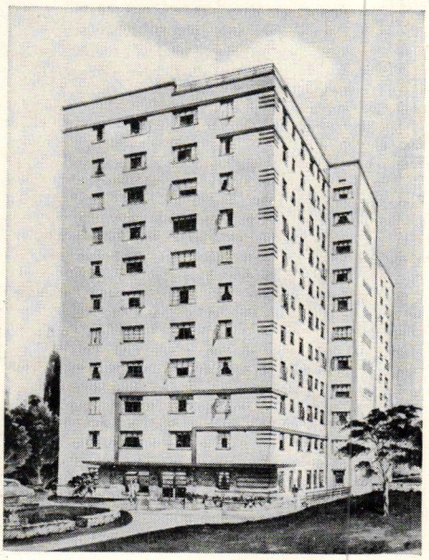
Architect, Victor E. DeMers



A thousand Navy families will enjoy the beautiful surroundings at M. E. Zerman's new Center Gardens Project, Patuxent, Maryland. A thousand new 7.6 cu. ft. Kelvinator refrigerators will be featured in the kitchens of these outstanding apartments.

1151 New Kelvinators Will Go Into 1151 Kitchens of Milton E. Zerman's Trio of New Projects!

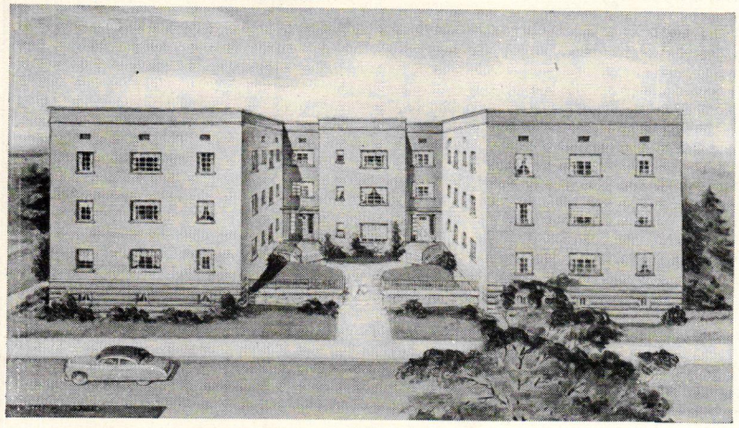
Aggressive, alert Milton E. Zerman knows building—and buying. He looks into his kitchens with eyes to the future. He says: "We're going to install Kelvinators again for the same solid reasons as always. They're beautiful. They make a hit with tenants every time. And they do the job so well that we can practically forget about costs or complaints." Why not get these benefits for *your* new projects? For detailed information, write to Department AF-2, Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.



11-story, fireproof construction distinguishes Milton E. Zerman's new Washington Arms, East Orange, New Jersey. A new Kelvinator refrigerator will star in each of 102 apartments.

Architect, Erwin Gerber

Architects, Erwin Gerber • S. Lawrence Klein



Solid masonry and smart conveniences throughout—it's Milton E. Zerman's new Fulton Towers, Union City, New Jersey. 49 garden apartments . . . 49 new Kelvinator refrigerators.

Kelvinator

Division of Nash-Kelvinator Corporation, Detroit 32, Michigan

REFRIGERATORS, RANGES, FREEZERS, WATER HEATERS, AIR DRIERS...*Electric, of course!*

'52 Housing Goal Cut to 800,000; New Curbs on Materials Studied

"If the government would stop making threats to keep us wondering what is going to happen next," said a Boston homebuilder last month, "we could solve our problems quickly. But just when we make up our minds what to do, and know something about the regulations already passed, the government either comes out with a new regulation or issues new threats that we never know will or will not materialize. This sort of uncertainty tends to set back production, whether there are materials or not."

If talk and threats would depress the volume of housing, government leaders had a good try at it during January. It was clear the administration would like to curtail housing the easy way by credit controls. President Truman asked Congress to revoke last year's relaxation of Regulation X. In an election year, he had almost no chance of success. At most, his request would offset a drive to weaken credit curbs further or even wipe them out. Lacking a financial weapon, the administration would use its lungs and mobilization power to allocate materials to do the same job. In an awesome volume of pronouncements, top administrative brass warned that building more than 800,000 to 850,000 houses would feed inflation, hamper mobilization. Truman did not propose a reduction for public housing, however. He urged 75,000 units, the same quota he sought last year and which Congress cut to 50,000. The major pronouncements:

Truman: "Housing starts in fiscal 1953 should be held to 850,000 or even less—depending on the availability of materials—because of . . . defense."

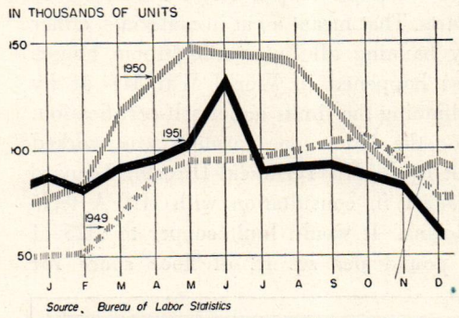
Mobilizer Wilson: "Any new investment in construction . . . increases the demand for men and materials. Therefore, the reduction of non-essential investment helps to reduce price and wage pressures as well as to free scarce materials and skills for more essential uses.

"While many types of investment must be increased because they represent basic increases to production capacity, curtailments in other areas will be helpful for stabilization as well as materials purposes. These include non-essential commercial construction, non-essential housing, . . . and industrial construction where capacity already exists."

Fleischmann: "We want a rounded construction-industrial program. . . . It's inevitable that housing should be cut down. . . . We think 800,000 is attainable with conservation and substitution. If you (builders) could increase the number of starts, to say, 1.5 million it would be a very bad thing for the defense effort, because that would entail all the plumbing and electrical gadgets that we have come to rightly regard as part of our standard of living."

Truman's Council of Economic Advisors: "Housing construction in 1952 must fall consideraby short of the annual rate which would meet long-term needs. To replace structures that are below standards of health and decency, and to house the growing population, an average of nearly 1½ million new non-farm units a year would be required throughout the 1950's. A large number of these should be publicly financed low rent housing for low income families. In 1952, even with prospective cuts in total housing, at least 75,000 of these units should be built . . . An inadequate supply of new housing is part of the price we must pay for national defense . . . It is essential that the bulk of the supply be channeled where it is wanted most, and that without these areas and elsewhere there will be concentration upon reasonably priced housing coupled with severe limitation of luxury housing . . . The proportion of low cost houses to the total new house supply should be appreciably raised above recent performances . . . for a mobile and contented labor supply."

HOUSING STARTS



Source: Bureau of Labor Statistics

SHIFTING TRENDS in nonfarm housing were evident in 1951 starts, which reached 1,090,000, second highest total in U. S. history although 22% below 1950's record 1,396,000. The year saw big gains in private building in nonfarm rural areas at expense of cities, a steep drop (nearly 50% from 1950) in private apartment building and big gains in public housing. By December, credit curbs had depressed housing starts to 62,000, the lowest monthly mark in three years.

How many starts? Amid the talk flared the rhubarb of the month: over 1952's housing goal. It began when DPAdministrator Fleischmann, divulging CMP allocations to Congress' Joint Preparedness Committee, announced that materials for housing would be cut back 40% from 1951's level of starts, thus leaving a 660,000 start level. Copper, Fleischmann told the legislators, was the villain (*see next page*). Homebuilders, mortgage bankers, savings and loan leaguers so quickly and violently denounced a 660,000 housing goal that DPA hastily backed up. First came a soothing statement from Deputy Administrator Ralph Trigg, who said, in effect, "we were only talking about *materials* for 660,000 houses; maybe you can build more." Even HHFAdministrator Raymond M. Foley, ordinarily slow to criticize other officials, called Fleischmann's announcement "ill advised." A week later, Washington-wise Foley took advantage of his dual role as Wilson's housing advisor to overtrump DPA Chief Fleischmann. The 1952 housing goal, Foley announced, would be cut only 50,000 units—from 850,000 to 800,000. Even this much, warned Foley, would require stiffer restrictions on materials and using up of inventories.

Writing the new rules was up to Henry Fowler's NPA. Probably, they would be announced in mid-February, when NPA's construction industry advisory committee was to meet again.

Alternatives. Washington buzzed with reports of what NPA would do. NPA attorney Henry M. Heymann announced cryptically "we are considering everything." Some of the possibilities:

- A quota system, under which builders would be limited to a percentage of the houses they started, say, in 1950. NAHB objects violently to this, points out it would leave no way of controlling the man who builds one house a year—50% of the nation's housing production according to the last HHFA figures.
- A square foot limitation, perhaps 1,400 or 1,500 sq. ft. This was in force during World War II but seemed to have no important advocates now. Fleischmann said flatly he was against it.
- Redistribution of inventories—suggested by Truman's economic council as a possibility. Most inventories of class B materials for housing (hardware, appliances, windows, plumbing fixtures)

NEWS continued on next page

COORDINATOR: NPA says it can't find one for construction

So far, said NPAdministrator Henry Fowler last month, mobilizers have been unable to appoint a top-level construction co-ordinator because they have not found a candidate who would agree to leave his business and devote full time to the job. If NPA's Construction Industry Advisory Committee would submit names of men willing to serve, a co-ordinator would be named promptly, he added. (One of the latest to decline the bid was New York Contractor H. C. Turner Jr., who was invited to "come down and help us" by Mobilizer Wilson when Turner joined a New York delegation pleading for changes in CMP controls.)

Fowler's remark, however, hinted that mobilizers might give industry a "put up or shut up" answer to its attack on construction controls chaos that seemed brewing for the Feb. 12 meeting of the U. S. Chamber of Commerce's construction industry advisory council. Best evidence the session will be hot: when the council asked Mobilizer Wilson to attend, he declined, asked if he couldn't send DPA Chief Fleischmann instead. The council replied it didn't want Fleischmann; it didn't want Fowler; wouldn't Wilson come himself?

IN THE NEWS

Among the next 19 pages are reports on these important developments:

The copper shortage	p. 24
Congress aims probes at building	p. 25
FHA fires Indiana director	p. 27
New kind of defense housing sought	p. 27
Mortgage market lies low	p. 28
NAHB convention	p. 32
Defense housing at Paducah	p. 44

were high, but nobody knew the inventory picture precisely and it would be expensive to have the census bureau take count. The Defense Production Act gives DPA power to redistribute inventories.

▶ Reduced self-certification limits. This seemed to have the best chance and probably would involve only copper *(see below)*.

Until new materials restrictions were spelled out in terms of metals, the 800,000 housing goal meant little more than last year's goal of 850,000 (result: 1,090,000). Said one prominent economist: "It seems like more smoke than fire." For commercial construction, allocated almost no materials in the second quarter, the outlook was disastrous. But many insiders were still betting that housing will reach 900,000 this year. For all construction, 1952 still looked like a $26-$27 billion year.

Copper Pinch Threatens Major Overhaul Of CMP Self-Certification for Housing

Government controllers had been crying wolf about the nation's copper shortage for so long that when the wolf finally arrived—right on schedule—he almost took homebuilders by surprise. For months, NPA's building materials chief, John L. Haynes, had been warning that allotments of copper to hardware and plumbing fitting makers had been cut so drastically their output could not support anything close to a million houses in '52. First half allotments, in fact, will permit them to produce only at about half 1951's rate.

Full pipelines. In restricting homebuilding, controllers were trying to balance starts against the number of houses they thought could be completed. Pipelines were still relatively full even of brass mill products.* Moreover, controllers were working in a statistical blackout. DPA had no figures on how much copper U. S. homebuilding really was chewing up. Therefore, for bookkeeping purposes, it had to assume every house built used the maximum self-certifiable allotment (160 lbs. with copper pipe, 35 lbs. with galvanized pipe). Actually, many builders use less. Dick Hughes of Pampa, Tex., uses 19 lbs. to wire a 1,036 sq. ft. Title I house. Stackler & Frank on Long Island use 106 lbs. for wiring and plumbing a 750 sq. ft. house. With electric stoves, Al Balch uses between 30 and 35 lbs. for a 940 sq. ft. house.

So the figuring becomes highly theoretical, except for one researched fact: 47% of U. S. homes use copper water pipe (HHFA housing characteristics survey). From this, using a weighted average of the maximum self-certifiable allotments, planners can compute that the 329,700 homes started in the second quarter of 1951 consumed 30.6 million pounds of copper. To save the 40% DPA demands be saved, builders would have to use 18 million pounds less copper in the second quarter of '52.

* The National Retail Lumber Dealers Association surveyed 1,500 members, reported few were having trouble yet replenishing supplies of copper wire, nails, lintels, flashing—all supposed to be in "critical supply."

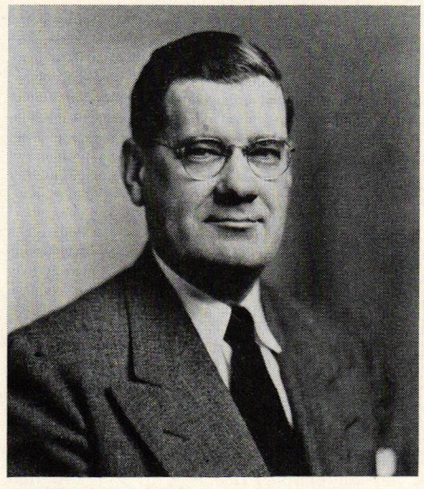
How to do it? Controllers swore they had no plans to put direct controls over starts. That meant a cut in materials, either by banning all but one-bathroom houses (as happened in World War II) or by trimming the limits under self-certification. For the latter, one formula was worked out by NAHB Technical Director Leonard Haeger in consultation with HHFA technicians. It would limit copper to .025 of a pound per sq. ft. of floor space for wiring up to a maximum of 28 lbs., with another 120 lbs. for the hot and cold water system. That 12 lb. cut in top allotments (from 160 to 148 lbs. per house) would save 12 of the 18 million pounds of copper in the second quarter. Another 4 million could be saved by banning flashing and termite shields. The National Electrical Contractors Association promptly squawked to HHFAdministrator Foley: 35 lbs. was the minimum possible copper wiring for a house with an electric range.

Another complaint was that all houses, big or small, require about 4 to 5 lbs. of copper for the ground and main leads. Thus, electric experts analyzing houses under 1,000 sq. ft. could find very few which get by on the .025 of a lb. per sq. ft. basis. Some took three times that much copper wire.

Why the shortage? The copper shortage is a compound of zooming demand (military take up from 3-5% of national supply before Korea to 50% now, says DPA Boss Fleischmann), dwindling imports and scrap collection and miners' strikes. Result: the U. S. had 200,000 less tons available last year than in 1950. Domestic ore itself has less copper: .9% these days compared to 2.11% in 1933.

The International Metals Conference set up allocations of copper ore for 36 countries, but since it set no price ceilings, Europe was free to outbid the U. S. It has. OPS, while clamping a price lid of 24½¢ lb. on domestic ore, permitted foreign ore to sell here for 27½¢. On the continent, copper ore sold consistently from 35¢ to 55¢ a lb. last year. U. S. imports shrank from 40,000 tons a month in 1950 to about 30,000 tons a month last year. U. S. policy of refusing to bid up the world copper price is part of a squeeze play controllers hope will work better than Stuart Symington's ill-fated squeeze play against tin prices. Because Uncle Sam is sitting on copper prices, the government is subsidizing marginal domestic mines. This will probably cost taxpayers untold millions of dollars. Fleischmann insists this is cheaper for the nation's copper consumers than letting the domestic price of copper rise to, say 26½¢. But many copper experts disagree.

How long a pinch? Last month, Mobilizer Wilson said he saw "no help in the copper shortage until at least 1954." Another day, he amplified this by observing "it will be 1953 before we can get as much as 10% additional capacity." On that basis, the government for months has been beating the drums for substitution of aluminum for copper. Of this, Chairman James J. Russell of Revere Copper and Brass snorts: "in the main, unsound." His argument:



ANTI-WASTE program gets new brass, but no teeth

Materials conservation achieved a higher status in the mobilization hierarchy last month when Mobilizer Wilson named John R. Townsend *(above)*, director of materials applications engineering for Bell Telephone Laboratories, as a part-time consultant. Townsend's assignment: to "promote" waste-saving methods and substitute materials. He will have the aid of the American Society for Testing Materials, whose 7,000 members include some of the country's top engineering brains. Townsend, a former ASTM president, joined Bell in 1919, served many government agencies during World War II, including WPB, AEC, Office of Scientific Research and Development and Army Ordnance.

Despite Townsend's appointment, there was no indication mobilizers intended to put any real teeth into anti-waste rules. So far, DPA has drawn up only one industry-wide anti-waste directive, for builder's hardware. But after hardware men protested, DPA agreed not to order it into effect unless similar standardization rules were applied to other industries.

aluminum is just as scarce as copper now; some of the substitutions suggested are "entirely impractical," while others "could be effected only over a long period . . . at extreme cost." Like steelmen, some copper producers are talking about the glut of their product in the offing, perhaps by "1953 or 1954."

Aluminum inroads. Whichever side is right, the electric industry was having a shotgun romance with aluminum, on the prevailing theory that the aluminum shortage will end first, perhaps this year. Aluminum is 84% as conductive as copper, but requires about two gauges bigger wire to carry the same amount of current. Big trouble with aluminum for electric wire is that it is hard to splice outside of factories, where it can be butt-welded. Aluminum wire cannot readily be connected to copper fixtures because the combination spawns corrosion.

Despite such handicaps, General Electric, producer of two-thirds of all light bulb bases, has switched part of its home bulb output from brass to aluminum. American Telephone & Telegraph Co. begged DPA for a bigger aluminum allotment for the first quarter so it could experiment more with overhead aluminum telephone lines in suburbs. (Urban underground conduits are too small for the 60% larger cross-sections needed.) Builder William Levitt is using aluminum wire for lead-ins in his new Levittown, Pa. Burndy Engineering Co., which makes connectors for 8 gauge and bigger aluminum wire, claims that by wirebrushing their compound Penetrox into the connection they can guarantee a non-oxidizing joint. But it takes careful workmanship. As one big eastern builder observed: "Theoretically, aluminum should be just as good as copper. But if there are any bugs to be worked out, we'd prefer some one else worked them out. We wouldn't want to have to go back and fix some minor grief in 1,000 houses."

Price advantage. In the long pull, aluminum seems likely to make big inroads on copper's market in the building industry. Price is the big reason. Ten years ago, aluminum sold for 20¢ a lb. and copper for 12¢. Today, aluminum is 18¢ a lb. compared to copper's domestic 24½¢. Moreover, in electric wiring, while builders need wire two gauges bigger, aluminum is so much lighter that 10 lbs. of aluminum will generally do the work of 30 lbs. of copper wire. Says President James J. Nance of Hotpoint, Inc., big appliance maker, "While we may switch from copper to aluminum or plastic because of necessity now, there are many of these changes that will be improvements, and they will be permanent."

Investigating Congressmen Aim Six Probes At Defense Housing, Mortgages, Waste

First session of the 82d Congress saw a record 130 investigations. But the second session which opened last month will probably eclipse it. Most phases of building will come in for their share of probing. Some of the bigger investigations:

Senate Banking Committee will dig into failures of the defense housing program, beginning with studies at the Savannah River, Paducah, Ky., and Hampton Roads, Va. An early February hearing in Washington will ask big institutional lenders why they won't buy VA mortgages, which might frighten some money out at 4% for "public relations."

House Banking Subcommittee headed by Rep. Albert Rains (D., Ala.) will explore charges builders got away with shoddy construction under FHA, got 120% mortgage loans. Its report probably will not be ready before May. Committeeman Albert Cole (R., Kan.) expects it to be neither "a whitewash nor a witch hunt." Although the resolution authorizing the investigation introduced by Committeeman William B. Widnall (R., N. J.) included VA home loans, too, Rains will leave this to the . . .

Teague Special (House) Investigating Committee, which has been checking abuses under veterans' education and home loan programs (Jan. '52 H&H, p. 50), now writing its report. Members say it will probably recommend changes in the VA appraisal system because present use of appraisers on a fee basis is "too cozy." The committee also wants more money to resume hearings outside of Washington.

Senate Preparedness Subcommittee led by Lyndon B. Johnson (D., Tex.) will concentrate on waste in overseas construction —a rich field. Many of the committee's staff of 12 investigators will girdle the world looking for sloppiness and worse. Last month, the committee revealed $103,000 was spent building an airfield at Mac-Rebel-Ksiri in North Africa before Maj. Gen. Archie V. Old decided the site was in "acute danger of flooding."

Hardy Subcommittee (of the House Committee on Expenditures in the Executive Department), headed by Lincolnesque, greying Porter Hardy Jr., (D., Va.) is a sleeper that should be watched. Already, it has made a 14-day, 10,000 mile inspection of 14 bases, uncorked the shocker that French taxes are getting $1 out of every $5 being spent by the U. S. to build military bases in France. Hardy likes to work in executive session, holds few public hearings. Sample of committee operations: in a pilot survey to gauge how to keep tabs on the $4.8 billion Congress blindly appropriated last year for military construction (280 projects within the U. S., 50 more around the world), Hardy sent investigators to seven military installations near Washington. What they found left them gasping: buildings which turned out to be twice as big as what Congress, in its cursory look, thought it was appropriating for, installations at air bases whose cost was eventually estimated at 18 times the estimate given legislators, buildings not needed for months rushed to completion by paying premium wages, adequate wooden barracks being replaced by brick barracks for no evident reason except that the military was taking advantage of its ability to get money now,



SHODDY CONSTRUCTION investigation by House subcommittee was to open in Washington with testimony by HHFA's Foley, FHA's Richards, VA's Bert King. Probers include (l to r) Reps. Albert M. Cole (R., Kan.), Isadore Dollinger (D., N. Y.), Albert Rains (D., Ala.), William B. Widnall (R., N. J.). So far, they have been surprised at lack of specific complaints sent them.

F. Clyde Wilkinson

NEWS continued on p. 26

sports and recreation equipment more luxurious than that used by colleges.

Joint Committee on the Economic Report (Patman Subcommittee) will hold public hearings to air Rep. Wright Patman's (D., Tex.) gripes against the Federal Reserve System. Patman wants perpetual easy money policy and direct control of the Fed by the President.

Joint Committee on Defense Production, headed by Sen. Burnet R. Maybank (D., S. C.) will investigate aspects of mobilization including allocations of steel, copper and aluminum, probably will not hold public hearings.

CODE CHANGES to permit non-metallic cable sought

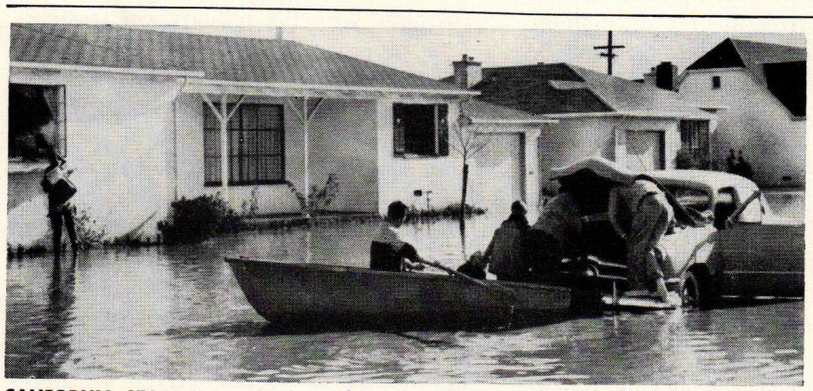
In several big U. S. cities, AFL electricians have teamed up with electrical contractors for years to maintain building code provisions banning non-metallic sheathed cable. Alternatives mean more materials, more labor, more profit per job. In Los Angeles, where the city code requires flexible or rigid conduit, builders figure that the average 1,100 sq. ft. house with 45 outlets thus involves a waste of $76.50 plus 202½ lbs. of steel.*

Last month, Los Angeles builders finally mounted enough strength to force the fight for non-metallic cable into the open. Initially, the city passed the buck to the chamber of commerce, which referred it to a critical materials subcommittee. There, non-metallic cable was defeated 3-2. One negative vote was cast by an electrical contractor, another by a plumbing contractor. After listening to builder protests, a bigger committee reversed that decision. With endorsement of the chamber, the case went back to Los Angeles' building department for a public hearing. Los Angeles builders pressed the National Electric Manufacturers' Association, which supports non-metallic sheathed cable, to lend its authoritative voice to the discussion. NEMA declined. Explained an official: "That's one of those things, the less said about it the better at this stage. Local officials get their backs up and then you get nowhere."

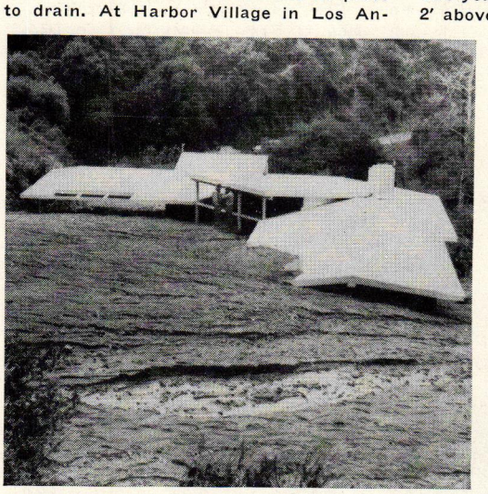
Balance of power. In Milwaukee, a fight to permit use of non-metallic sheathed cable has been carried on for the last six years, as the city wrote a new code. On the electrical code subcommittee was the leader of opposition to cheaper materials, E. H. Herzberg, head of the Milwaukee Association of Electrical Contractors. The business manager of the AFL electricians, Rex Fransway, was a member of the full code committee. Arrayed against them were appliance dealers, Milwaukee's association of commerce, board of realtors, builder association, local section of the American Institute of Electrical Engineers, county property owners association, apartment and rooming house operators association, hotel association and both newspapers.

But political power of AFL building trades proved stronger than the unchallenged argument that because of code restrictions, it costs $610 to wire a six room house in Milwaukee, but only $377 in Monroe, Wis. Milwaukee's common council voted 17-10 to approve a new building code which bans both non-metallic sheathed and service entrance cable.

* Empty flex weighs approximately ½ lb. per ft. About 9′ per outlet are required in typical residential wiring. Currently, on same design, non-metallic sheathed cable in Los Angeles *County* costs $3.80 per outlet, but in Los Angeles *city* flex hikes the price to $5.50 per outlet. Non-metallic cable is accepted by the National Electric Code, Underwriters Laboratories, National Board of Fire Underwriters and most regional codes, including the Pacific Coast Building Officials' Conference Code.

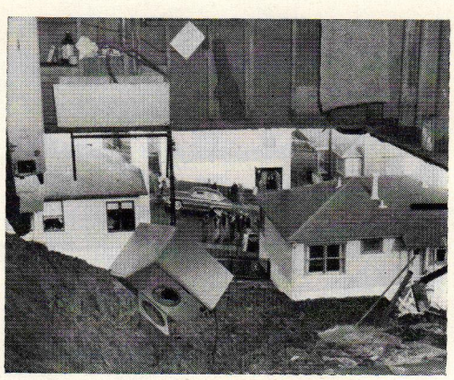


CALIFORNIA STORMS—worst since 1890—brought floods to hundreds of postwar tract homes built on low-lying sites where builders found land attractively cheap, like San Mateo Village (above) which suffers floods nearly every winter because it lies at high tide level on San Francisco Bay, where a swollen creek has no place to drain. At Harbor Village in Los Angeles, Developer Sam Oschin installed five pumps after an earlier, gentler storm backed water up 3′ deep. Residents held indignation meetings, but found no legal recourse because tract was subdivided in 1923 before Los Angeles required storm drains. Most of village was built in last two years, although tract's lowest point is 2′ above mean low tide.



IN GLENDALE, crumbling hillside from uncompleted subdivisions dumped tons of mud on Figueroa Street, which gave way, poured a slide through $19,000 home of Mrs. Mildred A. Lovejoy.

Photos: top and below, United Press —Acme; left, Associated Press.



IN SOUTH SAN FRANCISCO, a landslide undermined $9,450 postwar home built by Sterling Building Co., let slab floor collapse, leaving a clothes washer dangling by its rubber hoses.

TRUMAN BUDGET asks big boost for defense public housing

Most of the housing recommendations in President Truman's budget for fiscal 1952-53 (which proposed Federal construction spending of $7.7 billion—13% above the estimated total for the current year) faced an uncertain future in Congressional hands. His program:

	'51-'52 Actual	'52-53 Proposed
Government construction of defense housing	$25 million	$300 million
Community facilities in defense areas	$15 million	$25 million
Public housing (regular program)	50,000 units	75,000 units

Capitol Hill observers thought Truman would be lucky to get half of the $325 million he asked for defense area public construction. That would be about all he could spend in twelve months, anyway. Congress might well appropriate much less.

The regular public housing program will come in for congressional trimming, too. When Truman asked for 75,000 units last year, the House whacked the allowable total down to 5,000 units at one stage of deliberation. Some anti-public housers think Congress may suspend the program entirely, harking to the President's own budget message words that "during the coming months it will be necessary to reduce the level of housing construction further to make it consistent with the needs of economic stabilization."

HHFA Seeks a New Kind of Defense Public Housing: Demountable, Permanent

"Almost a third of the new homes built in the fiscal year 1953 will be in areas serving military and defense installations. . . . According to present estimates, roughly 400,000 new housing units should be built or placed under construction to meet needs in critical defense areas during the next 18 months."—President Truman, in budget message.

Government plans for defense housing had left a big gap between permanent homes and trailers. Moreover, of the $25 million appropriated by Congress for public housing in defense areas, by last month $24 million had been earmarked by HHFA for temporary units reminiscent of World War II eyesores, although even HHFA planners themselves considered such tempos a hasty, unsatisfactory and wasteful answer to the problem.

New approach. Last month, tall, youthful Ralph Kaul (whose official title is "special adviser to HHFAdministrator Foley for prefabricated, mobile and emergency housing") began a long overdue effort to bridge the gap. He invited some 60 prefabricators and merchant builders to submit plans and cost estimates for fully demountable and portable, but *permanent* housing for critical areas. His target: homes which require no more than 200 man-hours of labor to erect on the site, and can be knocked down, moved and reassembled with loss of only 5% of the materials. Kaul hoped to find manufacturers who could build such houses (in units of 100 or more) well enough to meet FHA structural specifications, yet with price tags no more than $9,000 for a two-bedroom house of 765 to 950 sq. ft., or $10,000 for a three-bedroom house of 985 to 1,200 sq. ft.

"Actually," said Kaul, "trailer coaches are perfect for staging areas where the housing need is really purely temporary." But with the nation embarked on a semi-military economy whose duration no one can foretell, he wondered "How can anybody say if the defense housing required today in many areas is for five or ten years, or 25 or 40 years?"

Speed sought. Kaul set up an ambitious timetable. He asked for bids on sample models (which will probably cost between $10,000 and $20,000 each) by mid-February. He hoped to have the first 10 or 12 prototype homes built and occupied by May or June. To test the portability of each house, HHFA will require the builder or prefabricator to assemble it near his plant or office, then knock it down, ship it 100 miles and set it up again on the site HHFA picks for livability tests.

Biggest hurdle Kaul's sense-making program faced was financial. Because private lenders will obviously be uninterested, HHFA's permanent demountable homes will have to become public housing—probably a big part of the $300 million President Truman seeks for public housing in defense areas in fiscal 1952-53. Kaul hopes the Public Housing Administration, as landlord, will be able to amortize its investment in 15 years per house by charging rents from $70 to $80 a month—perhaps $85 in high cost areas.

Ultimately, optimist Kaul hopes his demountable homes can become eligible for FHA insurance, probably the only possibility of making them attractive to private capital. This would require new legislation. It would take a revolutionary device for mortgage financing to cover a house that might next year be separated from its land. The need for such a tool was becoming evident.

FHA FIRES its Indiana state director for loan deal

For the second month in a row, FHA fired a top official. In December, it was Frederick D'A. Carpenter, Puerto Rico director. The ax fell this time on R. Earl Peters, 65, Indiana state director (since 1934), former newsman and attorney, and Indiana Democratic chairman who once lost the Democratic nomination for U. S. Senator to Sherman Minton, now a Supreme Court justice.

Herbert Rhodes, Indianapolis Star



R. EARL PETERS

FHA's close-mouthed press agent, Donald Alstrup, explained the agency recently discovered "by accident" that Peters in 1947 insured a $370,000 loan on a 46-unit Title 608 apartment in Fort Wayne through his own office. The Indianapolis *Times* provided a fuller explanation: it tipped off FHA after finding the name of Peters' son-in-law on the apartment house's incorporation papers.

Permission granted? Defending himself, Peters insisted that FHA Zone Commissioner George A. Bremer approved the project in a letter March 13, 1947. Replied Alstrup: "it was not a letter of clearance." Said Peters: "I interpreted the letter as approval. I understood there was no policy against (my action) as long as everything was regular. And there is no doubt about its regularity . . . I'm not bitter. I'm sad. I would have liked to resign . . . I availed



FIRST TITLE IX house in the U. S. was turned over to tenants Mr. and Mrs. Clyde Stuck (r) last month by Builder Earl W. Smith (c) at Pittsburg, Calif., while Richard W. Briggs (l), district FHA director; and HHFA's Regional Chief Justin Herman (2d from l) beam approval. Smith switched financing from Title II to IX after construction began. Stucks will pay $57.50 a month rent, $10 below HHFA scale.

NEWS continued on next page

myself of the law allowing the insuring of mortgages. The law was made for all." Mused Peters: FHA had jitters over threats of Congressional investigations in an election year. Ironically, Rep. Charles B. Brownson (R., Ind.) then asked for an inquiry. HHFA hastily ordered investigators to comb FHA Indiana files.

Little Mortgage Recovery Seen Before Summer; Fight Looms over FNMA

The mortgage outlook remained as divided as ever. While the free half of the mortgage market (conventionals) found plenty of investor money at 4½ to 6%, interest-frozen FHAs and VAs attracted fewer buyers. The shutdown on FHA and VA money was not quite so tight as a few months ago, but the difference was slight. In New York's secondary market, FHAs were generally running at par and VAs from par (very few) to 98. But in Seattle and Dallas, VA mortgages sank as low as 95.

Bonds look better. Only trouble remained the yield. Mid-January saw government long-term bonds (bank ineligibles of 1967-72) sag to a record low of 95 20/32, which meant an all-time high interest rate. Private bonds responding closely to fluctuations in the government rate, continued to gobble up most big institutional funds seeking investment. Predicted one life insurance executive: "It will stay that way unless the rates improve." Long Island's John Halperin, the nation's largest mortgage originator, was only slightly more optimistic, foresaw no appreciable improvement "until summer." He said: "Even at that, I don't think we will ever have the mortgage market we had (before March '51)."

Unwanted Title IXs. One result of the slow tapering off of 1951's big mortgage drought was that investors who *were* taking FHAs were highly selective about what they bought. Observed J. Maxwell Pringle of New York's Stern, Lauer & Co.: "There is plenty of FHA Title II money around for loans on houses in settled, stable communities . . . but little for defense areas."

In the coming months, this fact of financial life seemed likely to provoke political storms, as the unattractiveness of 4% VA loans was already (*see right*). Lender after lender said bluntly that the only way to finance a prospective 200,000 units of defense housing privately was for Congress to renew the advance commitment authority of Federal National Mortgage Association. This expired Dec. 31. Moreover, Fanny May left would-be builders of some $45 million of housing holding the bag because its $200 million purse ran dry. What Fanny May did with the $200 million:

Defense housing	$119,093,630
AEC housing	20,145,750
Wherry Act housing	52,786,900
Disaster housing (mostly Kan.)	7,599,600
Reserve for adjustments	374,120

But astute Washington observers were predicting that Congress would balk at more advance commitment power for Fanny May. The idea has never been popular in either the House or Senate. The House voice voted against pre-commitment authority last year and barely reversed itself on a division vote. In the Senate, such middle of the roaders as Douglas of Illinois and Fulbright of Arkansas can be counted on to fight against the government putting up the money for a loan it also insures.

PUBLIC HOUSING tax exempt bonds win lower rates

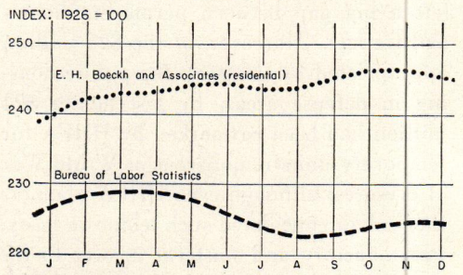
Despite the tightest money market in 20 years, the third offering of tax exempt permanent public housing bonds (sold January 15) brought a lower interest rate (1.95%) than the first two (July 2.07%, October 2.05%). Reasons: the $133 million issue was weighted heavily with New York and Baltimore bonds which stand high in market favor; investors are becoming more familiar with public housing bonds issued under the protection of the Public Housing Administration which must see to it (by contribution, if necessary) that local authorities meet the payments; the 1951 tax bill has whetted demand for tax-exempts.

VA DIRECT LOANS: bill would grant $25 million per quarter

Just before Christmas, the Veterans Administration opened a drive to sell $108 million worth of its seasoned direct-loan mortgages to private investors. By last month, few if any takers were forthcoming: buying them would only give VA more money to make more direct loans at the 4% interest private lenders find unattractive. In the impasse, a House veterans affairs subcommittee summoned spokesmen from VA and veterans' groups to a hastily-called hearing, then approved a bill to give VA's direct mortgage loan program $25 million every three months until June 30, 1953, when the law creating it expires. From the $25 million, the Treasury would deduct anything returned to the VA's direct loan fund by repayments and sales during the previous quarter. The measure still must come before the full House veterans committee and run the full legislative cycle in the Senate. Passage was far from sure.

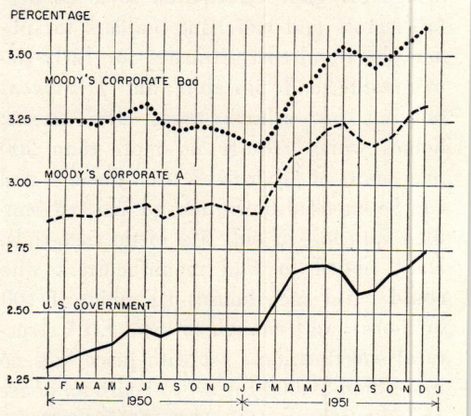
Financial bait. The Home Loan Bank Board tried a strategem to prod member savings and loan associations into buying government-held VA 4% mortgages. Member institutions have a statutory right to borrow up to 50% of their capital assets from the FHLB. In line with the administration's anti-inflationary policy, the privilege has been restricted to about 15%. Under the new scheme, members would be permitted to borrow an extra 5% or so if they would buy VA mortgages.

PRICES HOLD STEADY



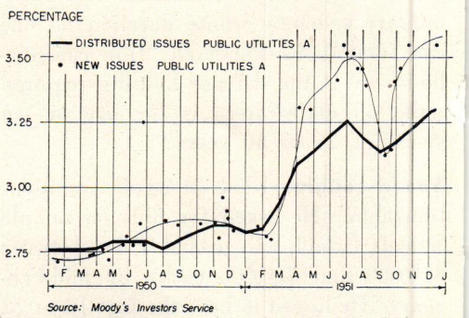
PRICE INDICES of housebuilding materials remained steady last month, as price cuts for wallboard, acoustical materials, interior partitions and appliances offset slight firming of lumber and plywood prices. Shrinking order files were expected to keep prices down (except for some critical copper and brass items), certainly through the spring months.

COMPARATIVE BOND YIELDS



TIGHT MONEY MARKET still persists as soaring military and industrial expansion creates pressing demand for financing, keeps bond yields high, renders government-insured mortgages relatively unattractive. Easy money era ended with unpegging of government bonds last March.

UTILITIES BOND YIELDS



Source: Moody's Investors Service

NET INTEREST RATE on new bond issues of gas and light utilities stayed close to those of bonds already in hands of individuals until last year's market break. Now they run far above for almost every issue (dots), constitute mortgages' stiffest competitor for investment funds.

NEWS continued on p. 29

NUTONE BANISHES . . .

® Grease Zone



EXCLUSIVE PATENTED FEATURE

No muss . . . no fuss . . . just a simple twist of the center thumbscrew . . . and NuTone's patented grille is washed as quickly and easily as a dish . . . and the "grease zone" disappears like magic. This is only one of the many reasons why NUTONE VENTILATING FANS ARE YOUR BEST BUY.

NUTONE VENTILATING FANS

Lower Cost Installed

Top Performance

Quiet Operation

Advance Design

Dependable

Economical

Safer

Save on initial cost . . . save on labor cost . . . NuTone Ventilating Fans are easiest to install . . . screw driver is the only tool required.

Laboratory wind-tunnel tests prove NuTone Ventilating Fans remove more grease-laden air than competitive fans in the same price range.

Motor and blade mounted on live rubber to cushion any vibration or noise . . . special double packaging prevents bent, noisy blades.

Fifteen wall and ceiling models styled to blend with modern interiors . . . in gleaming white and mirror finish combinations.

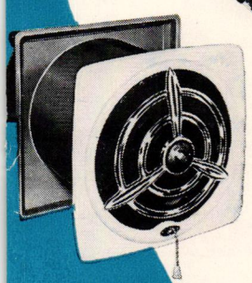
Heavy construction and hard baked finish on all parts. Built for long, hard use . . . motor guaranteed 5 years . . . trouble-free.

Specially engineered NuTone Blade and Venturi Tube produce powerful air delivery at low electricity cost . . . oil sealed motor requires no oiling or maintenance.

Underwriters' approval on all models . . . Convenient plug-in motor . . . can be removed when cleaning blades . . . Weather-tight and insect-proof outside hood.

THE MOST COMPLETE LINE IN THE INDUSTRY

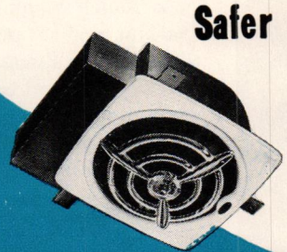
NuTone Ventilating Fans come in a wide variety of wall and ceiling models . . . for large or small rooms . . . priced low to fit any budget.



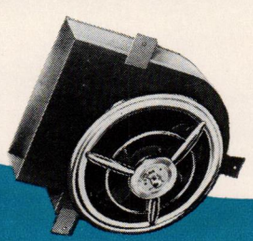
WALL MODEL 810



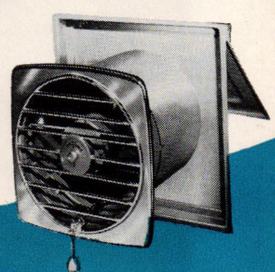
VERTICAL DISCHARGE MODEL 820



CEILING MODEL 840



CEILING MODEL 830



WALL MODEL 800

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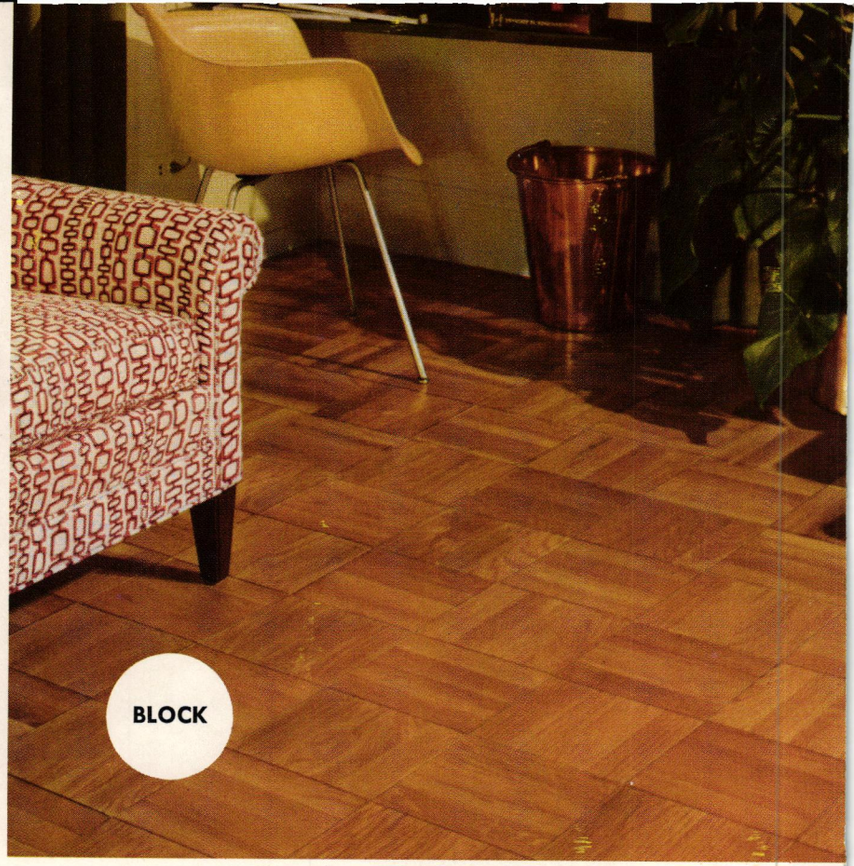
. . . Warm up "Cold Spots" in hard-to-heat rooms. A revolutionary new electric ceiling heater and overhead light. Saves valuable wall space. Easy to install . . . no pipes . . . no ducts. Safer than wall heaters. 10 models.



NUTONE HEAT-A-LITE

PHOTOS BY HEDRICH–BLESSING





Take your choice ...or take all three!



■ Today you can give home owners delightful variety along with the charm, beauty and other well-known advantages of Bruce Hardwood Floors.

Distinctive Bruce Blocks are ideal for modern as well as formal styles, and can be installed directly over concrete or wood subfloors. The new, glamorous Ranch Plank Floor (with alternate widths and walnut pegs) is perfect for rambling, informal homes in all price ranges. Then, of course, a Bruce Strip Floor is in good taste in any setting.

For a beautiful decorative effect at reasonable cost, use two or three types of Bruce floors in the same home. Specify "prefinished" to get the famous Bruce penetrating finish . . . and to save time and money on the job.

See our catalog in Sweet's and write us for booklets with color photos of Bruce Hardwood Floors.

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PRODUCT OF E. L. BRUCE CO., MEMPHIS 1, TENN.

BRUCE *World's largest maker of hardwood floors*

Freak House with Flexible Walls Tests Space Needs

How much space does the average young house buyer really need in his home? What is the best room arrangement to save steps for young wives? How big must rooms be to be really livable?

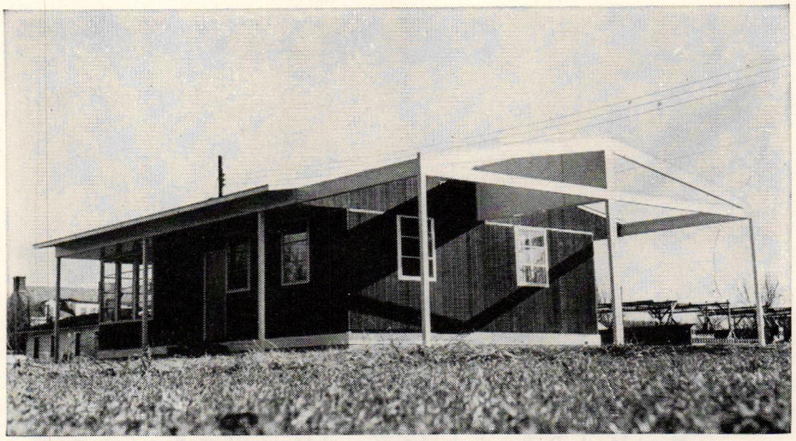
When HHFA handed the University of Illinois Small Homes Council $52,904 to investigate those deceptively simple questions, professional researchers pored over 41 U. S. surveys, concluded that *nobody* had yet come up with scientific answers. Upshot was a freak experimental house which Illinois professors like to call their "space laboratory." Its exterior walls are expandable and contractable. The interior floor plan and size of all the rooms are 100% changeable, *including all the plumbing.*

Guinea pig tenants. As the Small Homes Council proudly displayed its flexible house to the press recently, the first of two families was about ready to move in for six months of guinea pig living. The other family will occupy the house the last half of 1952. The two were chosen from 50 who answered an ad promising "free rent in return for co-operation in an experimental house." As typical of small home occupants, couples chosen by the Council were about 30 years old with one girl, one boy, of whom one is school age, the other preschool. "Co-operation" means the adult tenants will subject themselves to such scientific annoyances as strapping pedometers to their legs. Photoelectric cells and door counters will record trips to and from each room.

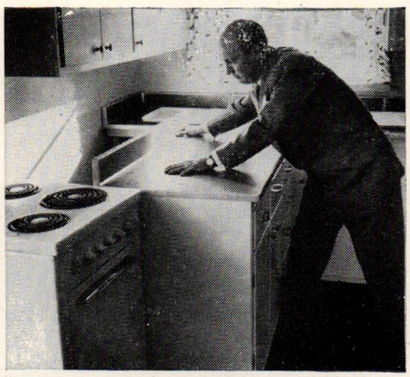
Quick change. Most tenants regard the end of the month as the annoying date when rent is due. For the Small Homes Council's experimental residents, month's end will be the time when the professors come around with saw, square, screwdriver, hammer and pliers and change the floor plan. Because of the research house's unique construction, such simple tools are all it will take to work even a major transformation. Roof and ceiling are held up by 10 columns at the perimeter, two of which support a plywood box girder 4′ deep and 43′ long forming the ridge. Inside this 32′ x 48′ cradle sits a house only 24′ x 36′. Neither its walls nor partitions bear any load, giving a flexible living space under a wood umbrella similar in some respects to Architect Raphael Soriano's steel flexible house in Los Angeles (Nov. issue '51).

Construction details. Over the 11′ x 32′ basement lies conventional joist construction with a plywood subfloor. Rest of the house is floored with panels set on concrete blocks to a 4′ x 8′ module. Thus when the researchers want a bigger house, they can add floor panels on any of three sides of the building. Wall panels are screwed to nailer posts which themselves are fastened to sill plates with metal connectors for easy removal. Interior partitions are laminated 1½″ fiberboard or 2′ x 4′ storage walls attached to ceiling and floor plates with ¼ round doweling. The bathtub is built on rollers. The toilet and basin are hung on movable wall panels. Plumbing is hooked to flexible rubber pipes. Surface raceway wiring permits easy changes. Even the heating system is flexible.

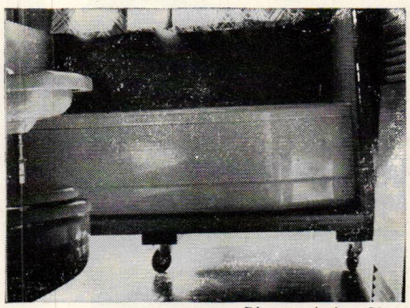
"What we're after is to see how big rooms should be to best meet family requirements," says Prof. James T. Lendrum, council director. "The results should help the housing industry build needed space into homes without waste."



OUTSIDE, TEST HOUSE LOOKS MUCH LIKE OTHER CONTEMPORARIES

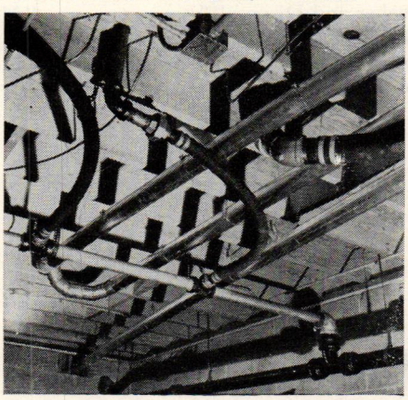


Project Director Rudard A. Jones, who designed house, demonstrates mobility of kitchen equipment. Cabinets are demountable in small sections so arrangement can be shifted.

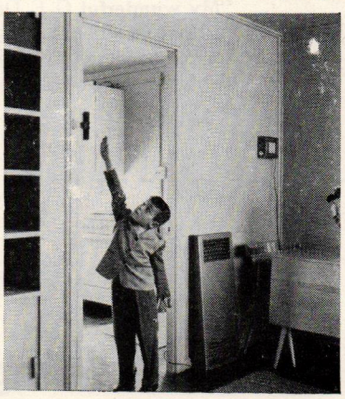


Photos: Arthur Shay

Bathtub on wheels brings chuckle from most visitors to test house.

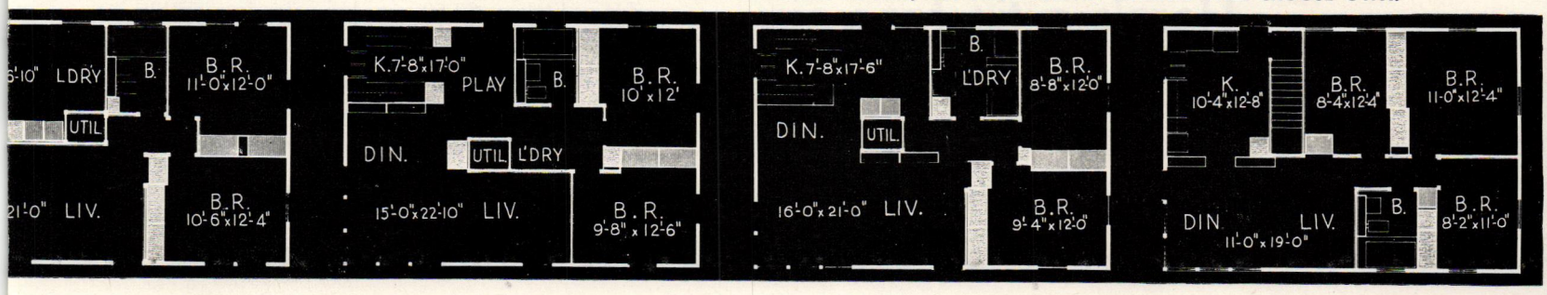


Rubber plumbing connections give the basement a Rube Goldberg look. Part of the time, 11′ x 32′ basement will be "off limits" to test family's storage space needs.



Electric eye will count trips to and from kitchen. Some allowance will have to be made for kids who want to record their comings and goings.

NEW FLOOR PLAN EACH MONTH WILL TEST FAMILY REACTION TO BIG AND LITTLE ROOMS; ON SIXTH MONTH TENANTS WILL CHOOSE OWN.



NEWS continued on p. 32

"Thanks for helping us sell

Meet Mr. L. D. Paschal  **and Mr. J. W. D. Paschal**  **of Louisville, Ky.**



They erected a model home with a G-E Kitchen-Laundry and immediately sold 40 houses.

Here they are calling back on one of the buyers of their Yorkshire Homes after she had lived in it for six months.



"My wonderful G-E Dishwasher and Disposall® saves me at least two hours a day, Mr. Paschal. There's no garbage for me to carry out. I just wash it away . . . and I do the day's dishes once, after the evening meal. No dishes for hubby to *dry*, either!



"Along with the many extra conveniences there's plenty of space for bottle storage in our G-E Refrigerator—which is quite important when you have a nine-month-old baby boy. We're never cramped for storage space. There's room for everything—even on week ends!

Building low-cost homes? Here's a tip for you.

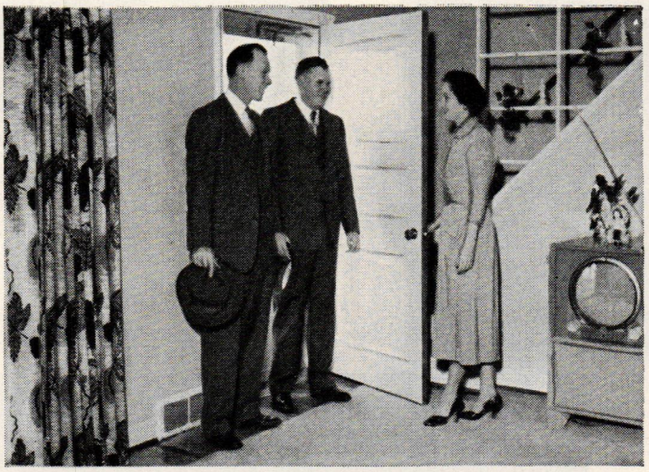
EVEN UNDER TODAY'S rigid credit restrictions, and higher down-payments, a low-income family can afford a General Electric Kitchen-Laundry.

You can include the cost of a General Electric Kitchen-Laundry in the long-term mortgage. It adds as little as $3.50 a month extra in monthly payments.

What one of the brothers found

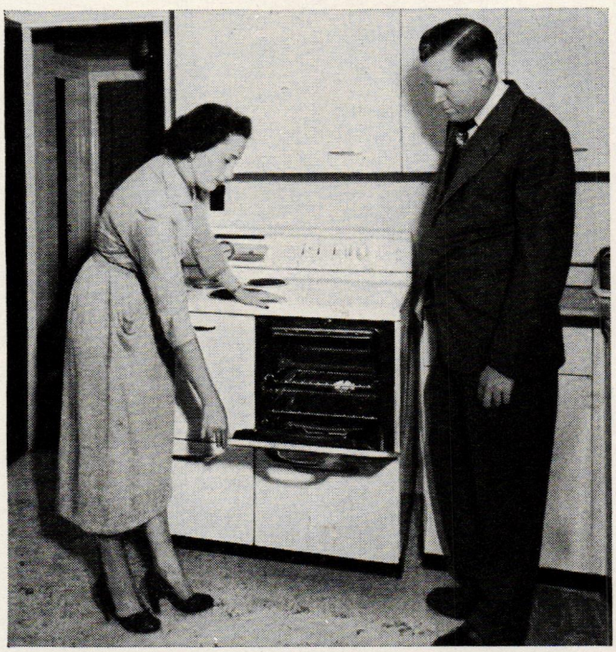
"Even in times of higher down-payments I find that my houses are sold ahead of my building.

our houses!"



"We're calling to hear what you think of the G-E Kitchen-Laundry, Mrs. Engle," says one of the Paschal brothers. "We want to know whether you are still as enthusiastic about G-E equipment as you were the day you signed up for the house."

"So glad you dropped by. I'll be glad to give you my reactions," says Mrs. Engle.



"I used to cook with gas, Mr. Paschal, so I feel I can't praise my General Electric Range enough. It's so very much cleaner, and there's no odor from the units. Not only does it cook fast, but the oven is cool even in the middle of summer.



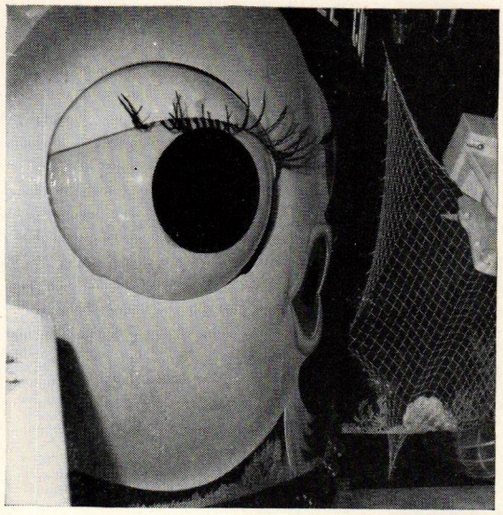
"I wash just about every day of the week, but it takes no time to speak of because I just put the clothes in my G-E Washer and G-E Dryer and they come out so fluffy and smell oh-so-good. Mr. Paschal, I want you to know that I'm *sincerely* pleased with my G-E equipped home!"

"There is no question in my mind but that the G-E Kitchen-Laundry is one of the *best* selling features a builder can put in his houses.

"These are two reasons why I chose General Electric. The first being their leading national acceptance and the second because they could furnish all the appliances to make up a kitchen and laundry under one brand name. Thanks for helping us sell our houses!"

Wouldn't it be a good idea for *you* to get in touch with your G-E distributor, or to write to G. E. *now?* General Electric, Co., Louisville 2, Ky.

GENERAL ELECTRIC



Surrealistic plumbing display was one of many filling five hotel floors and drawing big mobs.



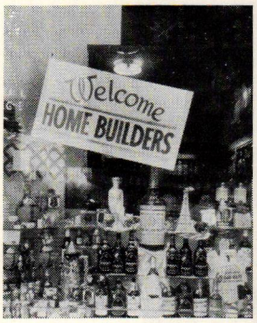
Hallway confab on copper substitutes was held by Chicago Builders (second and third from left) Irving Blietz, Arthur Fosse and colleagues.



Bill Atkinson, arms thrashing like windmill, opened '52 convention, spoke of pleasant gov't relations.

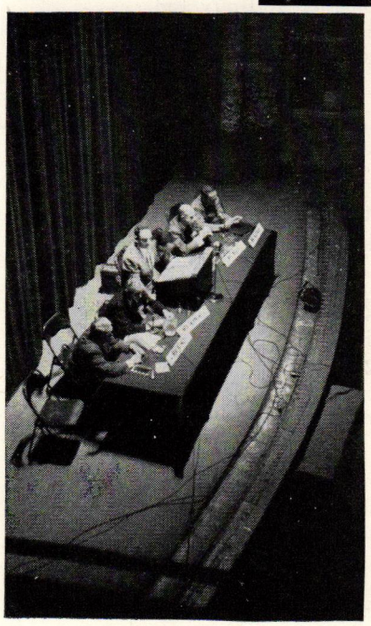
HOME BUILDERS

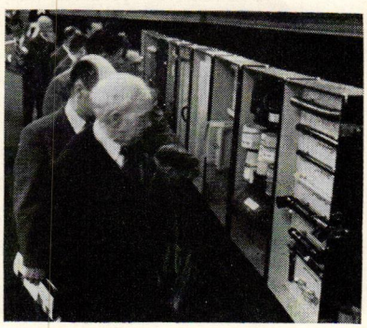
Photos: Arthur Sh





Builders jammed Hilton ballroom to watch 37 colleagues give away "Trade Secrets". Andy Place's storm window scored hi





Joe Schulte's plastic water pipes, glass coated faucets, dust-resisting paint struck DPA Chief Fleischmann as "miraculous."

Manny Spiegel referees at FHA-VA-FRB clinic in Eighth St. Theater while audience asks: "Is it true VA holds to less than replacement costs?"

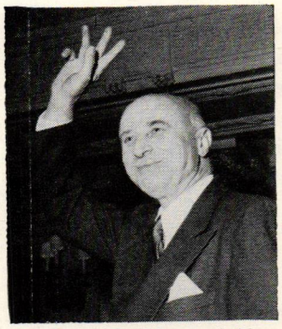
Swimming pools weren't on the convention agenda but Northwest builders Balch and La Pierre brought along Misses Tacoma, Portland, Spokane and Seattle anyway.



Cherubic Alan E. Brockbank, who succeeds W. P. (Bill) Atkinson as president of NAHB, has one item in his platform which he would all but drain the Great Salt Lake to achieve: get the nation's military and defense housing erected by private enterprise as a first-class job. The 48-year-old builder spent a good part of the past year getting this started. Brockbank is a native of the Mormon city, majored in industrial engineering and business administration at the University of Utah. After stints with Utah Copper Co., Utah Power & Light Co., FHA and the Agricultural Credit Corp., he now builds from 30-100 homes a year in the $9,500-$12,000 bracket. He has developed both subdivisions and shopping centers. He is a director of Housing Securities, Inc., of New York, the mortgage clearing house set up by Tom Coogan. President Brockbank is the kind of man who wins everbody's good humor: rosy, full cheeks, trusting blue eyes, a constant smile, closely cropped hair turning iron-gray, and a comfortable way of saying "folks" when he is chairman of a meeting. Last year Brockbank was NAHB's first vice president.



CONVENTION sets sights on defense housing, elects Brockbank president



His Honor the Mayor of Glendale, Paul Burkhard, new NAHB secretary.



1952 Treasurer Dick Hughes and 1st V.P. Manny Spiegel look over a blueprint.

With only a moderate amount of the usual convention giddiness, 7,000 members of the National Association of Home Builders gathered in Chicago's Conrad Hilton Hotel Jan. 21-25. They were there to say what they wanted to do and hear what they would be permitted to do in 1952—the year the government calls the most belt-tightening in its peace-time mobilization program.

NAHB soon found that while the government was calling on the housing industry to start no more than 800,000 homes this year, many influential officials and legislators agreed with builders that anything less than 800,000 would be inflationary (see p. 39).

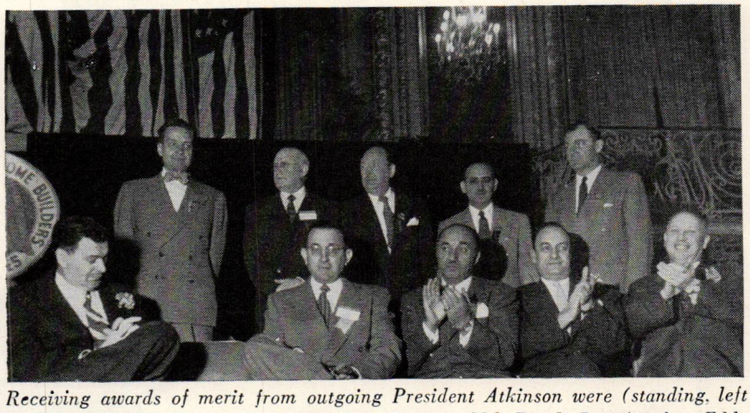
Ceiling, says Foley. The 800,000 figure (actually 140,000 greater than DPA earlier said would be possible) was announced in Washington by HHFAdministrator Raymond Foley on the convention's opening day. Twenty-four hours later he was on the platform in the Hilton ballroom to repeat it in person (even to the extent of reciting, "according to Foley's statement"). Foley insisted the 800,000 wasn't a goal: it was a ceiling.

Builders, who had their eyes on one million starts, grumbled. But grumbling changed from a "damn the government, anyhow" to "We had better get busy. If we don't find a way to solve the lack of mortgage money and copper it'll mean more public housing and more Washington directives." Alabama's Senator Sparkman warned if private industry couldn't raise mortgage money, government would. DPA's Manly Fleischmann hoped American construction ingenuity would find copper substitutes. Armed Forces Housing Chief (and ex-NAHB head) Tom Coogan and the NAHB's new platform concurred: military and defense housing was the industry's No. 1 goal. The homebuilders also:

▸ Elected Salt Lake City's Alan E. Brockbank president with a minimum of behind-the-scenes wrangling. Chicago builder Nat Manilow, Brockbank's leading pre-convention contender, graciously bowed out to preserve peace, as did Texas' Dick Hughes. As one insider put it, "The election took just about 30 seconds." NAHB's eighth national convention was one of its most peaceful. Others elected: **First Vice President:** Emanuel M. (Manny) Spiegel, 45, of New Brunswick, N. J., former attorney who has built 1,000 one-family homes and several apartment developments in his ten years in the business. **Second Vice President:**



Only 7,000 builders registered but wives, press and exhibitors accounted for another 8,000 people. At night, washing off copper and mortgage money problems, they danced and watched trampoline entertainers.

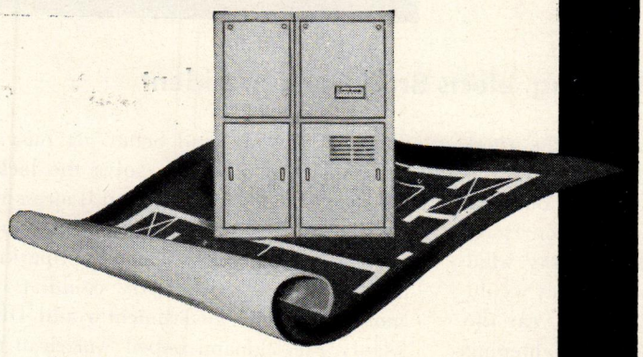


Receiving awards of merit from outgoing President Atkinson were (standing, left to right): Past Presidents Rod Lockwood, Detroit; Milt Brock, Los Angeles; Eddy Carr, Washington, D.C.; Joe Meyerhoff, Baltimore; Fritz Burns, Los Angeles; and (seated) Convention Chairman Joe Haverstick, Dayton; 1951 Secretary Dick Hughes, Pampa, Tex.; 1951 Treasurer Nate Manilow, Chicago; 1951 2nd V.P. Manny Spiegel, New Brunswick, N. J.; and 1951 1st V.P. Alan Brockbank, Salt Lake City. This year's officers drafted a platform calling for: promotion of defense and military housing; maintaining an adequate civilian housing supply; restudy of FHA Title IX "to make it fully effective."

NEWS continued on p. 36

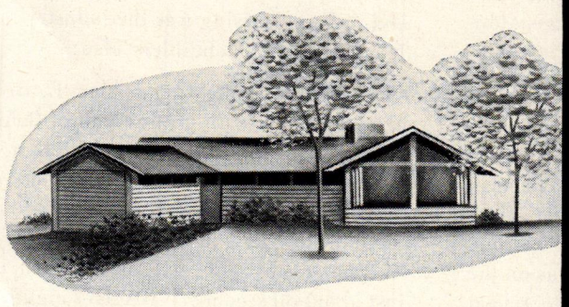
How would you do it?

If you were commissioned to design a house around air conditioning, would the air conditioning affect your design?



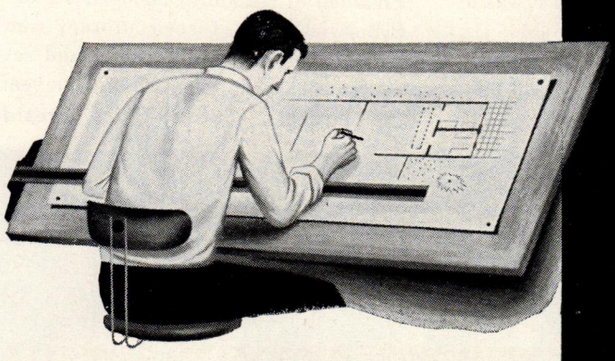
We think it would

We've seen air conditioning at work before. We've seen it revolutionize the textile industry, we've seen it redesign skyscrapers. That's why, when we developed the new Carrier Weathermaker Air Conditioner for homes, we thought of it in terms of a new kind of home . . . a Weathermaker Home.



We asked around

We asked architects . . . and we asked builders. And they told us that a Weathermaker Home could be more compact, that it wouldn't need to use its windows for ventilation, that it would be simple to orientate. They told us that it might cost no more than a conventional home. And that it could be a much better home.



What do you think?

What do you think? How would you design a Weathermaker Home? Would it be all-glass or no-glass? Would it take its cue from the compass or blithely ignore the compass to face a view? We'd be glad to send you a book we've had written on the idea — and the facts on the Weathermaker Air Conditioner.

CARRIER CORPORATION
313 S. Geddes Street, Syracuse 1, N. Y.

Please send me "How to Have a Carrier Weathermaker Home."

Name _____

Street _____

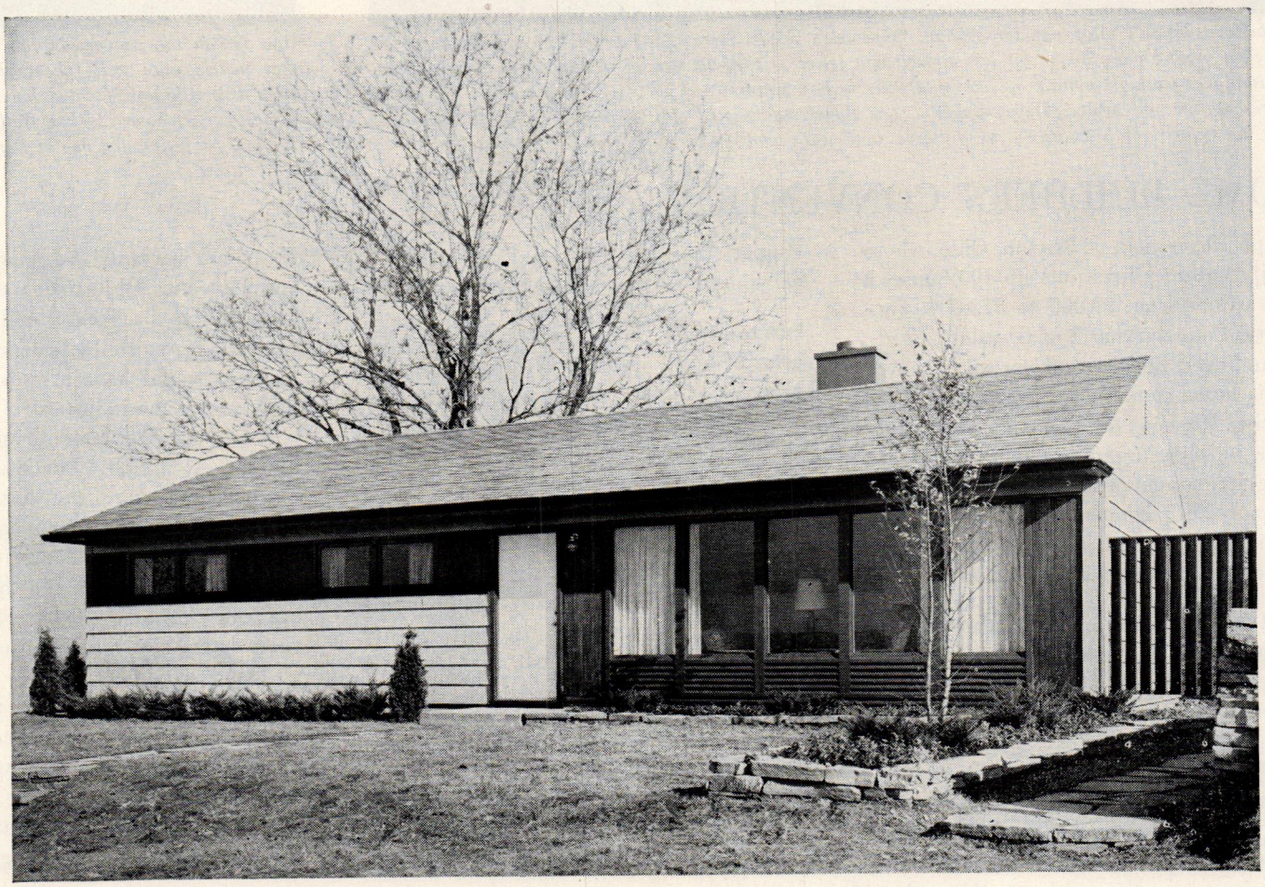
City _____ *State* _____

Carrier

AIR CONDITIONING • REFRIGERATION

NATIONAL HOMES

are easier to sell . . . easier to erect



This is Important to You because:

National's method of construction greatly simplifies the erecting of homes. It cuts possibilities of errors in half — holds field labor to a minimum. If you are a conventional builder, you'll be amazed at the difference! National Homes also helps solve your problems of sales, financing, and materials procurement. . . . Be a National Homes Dealer!

Nationally advertised in The Saturday Evening Post, Woman's Home Companion, McCall's and other leading magazines, all helping to make YOUR sales job easier!

NATION'S LARGEST PRODUCERS OF PREFABRICATED HOMES

National HOMES
CORPORATION, Lafayette, Ind.
EASTERN PLANT: HORSEHEADS, NEW YORK



At the convention's most popular session, "Operation Trade Secrets," 37 architects and builders gave advice on getting more house for less money with fewer critical materials. Wallace Johnson of Memphis improves workers' morale by featuring their names, pictures and parts in construction in a brochure he presents the new owner. Dave Slipher of Los Angeles advocated plastic spray coating—the kind U.S. Navy uses for "moth balling"—to preserve bath tubs and other plumbing during installation.



One reason the convention ran so smoothly was that panels were well rehearsed ahead of time. Here Bill Atkinson (seated lower right) and his 37 cost-cutters have a look at Builder Andy Place's single cast fitting for one and a half bathrooms.

HOME BUILDERS' CONVENTION:

Joseph Haverstick, of Dayton, Ohio, whose family building firm puts up 100 houses a year priced from $9,000 to $12,000. **Secretary:** Paul Burkhard, of Glendale, Calif., an architect, builder and currently mayor of his home community. **Treasurer:** R. G. (Dick) Hughes, of Pampa, Tex., whose home building operations encompass five Lone Star communities and whose six-story company-built, company-owned office building in Pampa, with electronic heating, is one of the proudest sights in town.

▸ Put on a full-scale trade secrets show. Trade secrets, the pride and brainchild of 1951 President Bill Atkinson, works on the assumption the whole industry wants to produce "more house for less money." When 37 of the nation's top builders started disclosing (and demonstrating with models) their price cutting tricks, arms of builders in the audience shot up like a bed of nails, so curious were they with questions. Now NAHB intends to take the show on the road for the benefit of builders who didn't come to Chicago.

▸ Heard reports from leading producers that timber, cement, roofing, flooring, gas utilities, electrical power facilities, vitreous china, enameled iron fixtures, steel windows, Venetian blinds and lumber will all be in ample supply this year. (Besides copper, the pinches should be limited to galvanized nails and galvanized steel pipe.)

▸ Heard from Robert Taylor, research director of Structural Clay Products Research Foundation, that a new size of brick, 6″ x 12″ x 2½″, to speed masonry construction and cut costs 50% will be brought out about April 1. Taylor also reported development of a new acoustical tile with sound absorption qualities, a construction scaffold that moves up a wall as it is built so bricklayers need not stoop, and a new system of laying brick so good that untrained college boys quickly learned to work two to three times faster than average bricklayers.

▸ Heard HHFA Research Director Joseph Orendorff report that:

15 lb. asphalt-saturated roof felt is inadequate for a moisture barrier under concrete slabs because it is soon disintegrated by fungus. A 45 to 55 lb. smooth surface rolled roofing felt is better.

A slab tapering from thin edges to a thick center can withstand torsional forces of unstable soil better than an even slab.

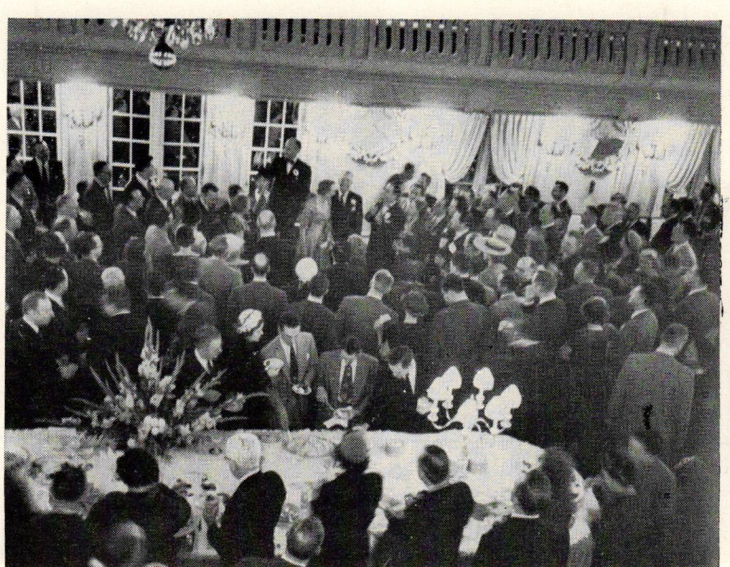
Guaranteed workmanship. Flexing with maturity, NAHB announced it now had 25,243 members, represented 75% of the nation's homebuilders in metropolitan areas. Aware that with size comes responsibility, the association endorsed issuance of "Home Owners Service Policies" giving buyers a six-month warranty and drew up a standard form for one. Objective: weed out "Pickle packers," as Brockbank calls construction carpetbaggers. Builders deprived of NAHB insignia would have a more difficult time dishonoring the industry.

A hint of larger houses came from Seattle builder Al Balch. "People really want $12,000 homes now, not those for $7,000," he said. "GI's should be encouraged to pay an extra $350 down for an FHA loan on their first small home and then, when they are ready for a more expensive house a few years later, apply for the more beneficial GI loan."

NAHB directors called on the lumber industry to cooperate with them in devising waste-saving cuts. HHFA's anti-waste committee last year urged that 25% of raw lumber be saved by cutting the 2″ x 4″ to 1½″ with the sides left rough.

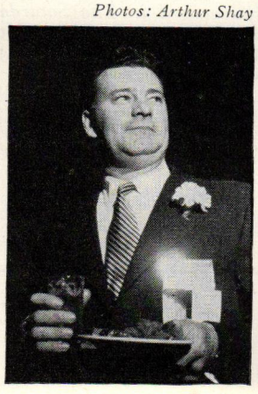
Home & '62. Now that he can relax after a year of shepherding the NAHB, ex-President Atkinson let his thoughts wander to the house of 1962. Said he: "It may be atomically heated, gain its light from light-radiating surfaces, have few movable furniture units, glareless windows, a push-button roof aperture, movable walls and room enough for sister to take her elementary arithmetic class by television."

NEWS continued on p. 39



HOUSE & HOME's *reception for the NAHB officers in the Blackstone Hotel ballroom took place minutes after they were elected and brought forth a throng of 1,200 well-wishers. One new officer enjoying himself at the party, Convention Chairman Joe Haverstick, of Dayton (below), now NAHB treasurer. Also having a good time at the reception were Past Presidents Tom Coogan (left) and Bill Atkinson, Mrs. Atkinson and Mrs. Coogan.*

Photos: Arthur Shay







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THE ALL-ALUMINUM MIAMI AWNING WINDOW

Swift, clean lines, slender mullions and large glass areas are part of Miami Window's functional and versatile design.

Constructed from extra heavy aluminum alloy sections (63-ST5). Both sides of vent sections are actuated with equal pressure through a patented, concealed torque shaft allowing easy, balanced opening and closing. • Plastic weather-stripping, optional.

• Available for immediate shipment.

Specify the all-aluminum Miami Awning Window for homes, hospitals, schools, and office buildings.

"The Finest Awning Type Window Made"

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MIAMI *Awning* WINDOW

Air Infiltration Tests Taken by Pittsburgh Testing Laboratories





Colorful Kentile Floors like this resist dirt, stain and wear for years... stay fresh and new-looking with minimum maintenance effort and expense.

Kentile Floors add sales appeal to small homes

KENTILE FLOORS increase the value of small home construction by lowering building costs ... raising quality. And, they present architects and builders with a plus selling point ... the proven prestige of a nationally advertised brand home buyers know and trust.

Kentile Floors can be installed anyplace ... over any smooth, firm interior surface ... even below grade over concrete in direct contact with the earth. Once down, Kentile's wide range of modern colors are part of the floor for its long life ... they go clear through to the back of the tile ... can't wear off.

Yes, Kentile's initial low cost and speedy, economical installation plus its famous durability have made it the preferred floor for small home construction ... the first choice of sales-wise architects and builders ... value-wise buyers.



KENTILE®

The Asphalt Tile of Enduring Beauty

KENTILE • SPECIAL (Greaseproof) KENTILE • KENTILE RUBBER TILE • KENCORK

KENTILE, INC., 58 Second Avenue, Brooklyn 15, New York • 350 Fifth Avenue, New York 1, N. Y. • 705 Architects Building, 17th and Sansom Streets, Philadelphia 3, Pennsylvania • 1211 NBC Building, Cleveland 14, Ohio • 225 Moore Street, S.E., Atlanta 2, Georgia • 2020 Walnut Street, Kansas City 8, Missouri • 1440 11th Street, Denver 4, Colorado • 4532 South Kolin Avenue, Chicago 32, Illinois • 1113 Vine Street, Houston 1, Texas • 4501 Santa Fe Avenue, Los Angeles 58, California • 95 Market St., Oakland 4, Calif. • 452 Statler Building, Boston 16, Mass.

BUILDING PRODUCTS

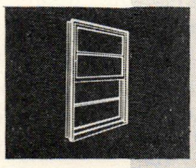
You build for two things... pride and profit. Pride in the fine details of your building. Profit through greater sales appeal.

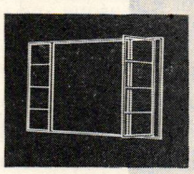
You will gain in both if your windows are **Reynolds Aluminum Windows**... visibly superior in their satin finish, in their careful assembly of Reynolds own extruded shapes. Casement Windows with flash-welded corners for greater rigidity and weathertightness. Awning Windows with Auto-Lok hardware and cross-lapped weatherstripping. Double-Hung Windows of extra-heavy depth, precision balanced.

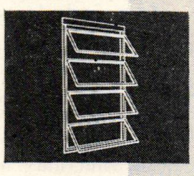
You'll point with pride, too, at **Reynolds *Lifetime* Aluminum Gutters and Downspouts**... non-staining, non-rusting, good looking. And you'll note, on the profit side... lowest cost of any rustproof material... easy application without soldering.

Add the invisible but potent magic of **Reynolds Aluminum Reflective Insulation** and you will have used, wisely, the material in tune with our times... aluminum.

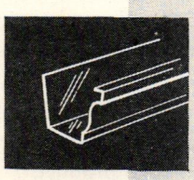
Write for literature. **Reynolds Metals Company,** Building Products Division, 2019 South 9th St., Louisville 1, Kentucky.

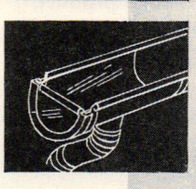






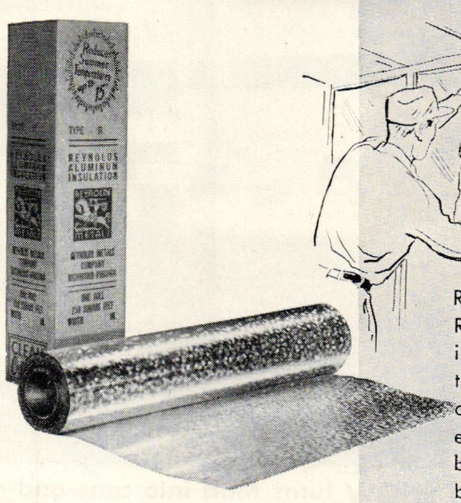
Reynolds Aluminum Residential Casement, Fixed and Picture Windows, Awning Windows, Double-Hung Windows are visibly superior in workmanship and finish. Send for catalog showing all types and sizes.





Reynolds *Lifetime* Aluminum Ogee and Half-Round Gutters with matching downspouts and fittings, give you beauty and superior performance at a decided price advantage.

Military demands for aluminum limit supply of these products, but Reynolds is rapidly expanding aluminum capacity. Keep checking your supply source.



Reynolds Aluminum Reflective Insulation is a superior lamination of embossed foil on kraft paper. High efficiency without bulk. Perfect vapor barrier, too. Rolls of 250 square feet, 25", 33" and 36" wide.

ALUMINUM

Tallulah Bankhead in "The Big Show" on Radio, Sundays—NBC NETWORKS

Gropius Exhibit Wins Critical Acclaim

Boston's Institute of Contemporary Art last month opened an exhibit covering almost half a century of creation by **Walter Gropius,** 69, chairman of Harvard's school of Architecture. Newspaper critics found it an occasion for evaluating Gropius' contribution to modern design.

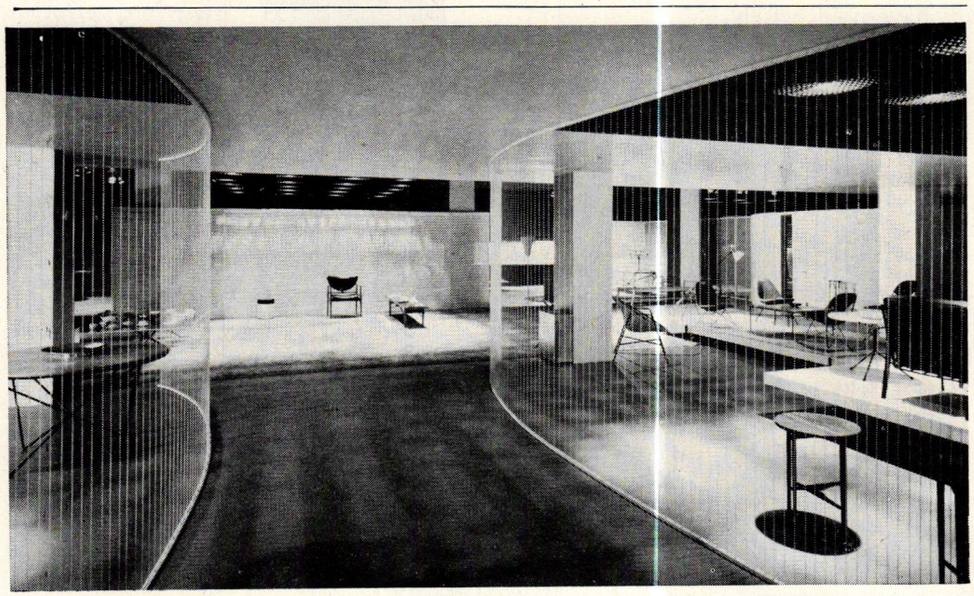
Said the *New York Times:* ". . . Gropius' great value lies not in being either architect *or* teacher but in being architect *and* teacher . . . (his) principles still stand as basic themes from which endless improvisations can be evolved. He is still realistic and forward looking . . . a whole thinking man, he has left his mark both in Europe and in our own land."

Said the *Christian Science Monitor:* "Those tempted to look upon some of Gropius' works as matchboxes on stilts will be surprised to see some of his creations attuned to the modern needs of sleekness and utilization of all available space . . . Gropius holds his own because there have been no startling innovations in architecture since he helped foster its reforms."

Generally overlooked was what may be Gropius' most striking contribution to architecture: he was the first to realize modern building is closely linked with modern industry, and, accordingly, had his great design school at Dessau, Germany, liberally supported by industry and tied in with industry so his students knew how things were made that went into their final product.

Gropius, too, found it an occasion for reflective thoughts. "The real crisis which the architectural profession faces today," he told an interviewer, ". . . is the impact of industrialization on life and the architect has generally not been able to bridge the change. In the future there will be more teamwork in building—teamwork of the electrical engineer, the acoustical engineer, the sociologist and the other people who are needed to arrive at a good conception. The architect should be the coordinator. Yet 80% of the buildings today are built without architects and the average income of architects is about the same as that of a bricklayer in the east."

The exhibit, spectacularly set up by MIT Visual Education Professor Gyorgy Kepes, contains pictures and models of 37 Gropius projects—from his Pomerania Workmen's Houses of 1906 to the Architects' Collaborative Harvard Graduate Center of 1949. So dramatic was the impact that one viewer reported the "general impression of walking through a giant textbook, all black and white." After the Boston showing, the exhibit goes to Philadelphia, Cleveland, Chicago, Colorado Springs and San Francisco. The 2½-year-old Lustron-RFC wrangle was on home stretch last month: RFC dropped its $15.5 million civil suit against Lustron's ex-president, **Carl G. Strandlund.** Attorneys announced it as an "out-of-court settlement." Actually, the Strandlund family transferred all of its Lustron stock to the RFC, including patent rights for the prefabricated porcelain-on-steel housing business. Strandlund had put both up as collateral for the first $15 million of the $37.5 million RFC loaned Lustron.



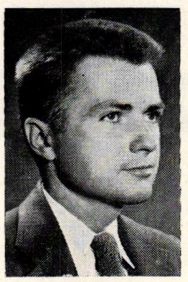
Carl Ullrich, Inc.

GOOD DESIGN SHOW turns Mart into cane and mesh museum

Third annual Good Design Show, co-sponsored by New York's Museum of Modern Art and the Chicago Merchandise Mart, opened at the Mart January 10. Carryovers from last June almost equaled the number of new entries (188 vs. 195). Architect Paul Rudolph's well-lit, subdued settings, with space partitioned by translucent screens of string, caning and mesh *(above)*, drew almost as much attention as the exhibited furniture, fabrics, and pottery. Show employees liked setting because "it looks just like a museum." Also noteworthy: Waite Carpet's adaptable fiber floor coverings, some of paper fiber, and Eames's scaled-down chairs *(rear right)*.

When Architect **Paul Rudolph** of Miami appealed to the Navy for a 30-day extension of orders to active duty (Dec. issue '51) so he could arrange the Good Design Show (*see below*), he was invited to present his case to a board of admirals at the Pentagon. After hearing Rudolph explain his work for an hour and ten minutes, the admirals were so impressed they revoked the orders entirely.

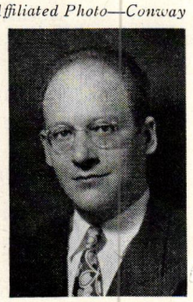
J. J. Steinmetz



RUDOLPH

Named: **William C. Vladeck,** architectural specialist in large-scale housing, as president of the Citizens Housing & Planning Council of New York; **Philip N. Klutznick,** president of the American Community Builders, Inc., as chairman of the Chicago branch of B'nai B'rith's Anti-Defamation League; **Harris M. McLaughlin,** vice president of the Calif. Bank of Los Angeles, as president of the Zonite Products Corp.

Affiliated Photo—Conway



VLADECK

Elected: **Ernest Szekely,** 63, president of the Bayley Blower Co. of Milwaukee, as president of the American Society of Heating and Ventilating Engineers.

Died: **Gordon Drake,** architect, 34, of San Francisco, Jan. 15, of a heart attack while skiing near Echo Lake, in California's High Sierra. **John W. Coulston,** 95, retired head of the Richard Coulston, Inc. paint manufacturing firm and former president of the East Orange, N. J., city planning commission, Jan. 13 in East Orange; **John C. Knight,** 85, first president of the National Assn. of Building Owners & Managers and a Metropolitan Life vice president, Jan. 11 in Tice, Fla.; **Arthur R. Koch,** 77, one of Brooklyn's first registered architects who headed his own business for 50 years, Jan. 9 in Brooklyn; **Benjamin A. Howes,** 76, architect, engineer specialist on such subjects as reinforced concrete and electrometallurgy, one-time specifications and materials chief for the Federal Public Housing Administration, Jan. 9 in Walpole, N. H.; **Harry B. Finnegan,** 57, executive vice president of General Builders Supply Corp. and a brother-in-law and associate of former Postmaster-General James A. Farley, Jan. 7 in New York City.

NEWS continued on p. 44

KENNATRACK *leads again!*

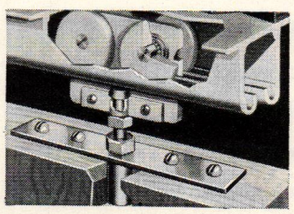
AMAZING NEW SERIES 800 METAL SLIDING PASSAGE DOOR FRAME GIVES YOU ADVANTAGES NEVER BEFORE AVAILABLE!



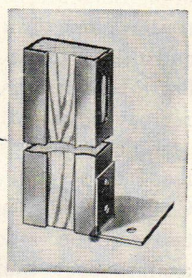
saves time
saves labor
eliminates warp

Builders, architects and owners from coast to coast are demanding the Kennatrack Series 800 Metal Frame for sliding passage doors. This frame saves time . . . saves labor . . . eliminates warpage, and can easily be installed by anyone. Treated for rust resistance. Multiple adjustment features make fit and plumb child's play. Designed for all standard 2 x 4 walls. Frames come in standard door widths. Secure complete facts . . . then you can see more clearly just what these advantages mean.

THESE ARE A FEW FEATURES



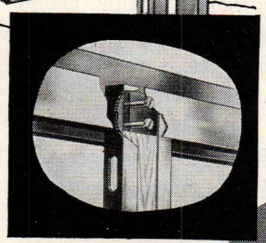
Door rolls smoothly, quietly on not two . . . not four . . . but on EIGHT Nylon wheels. Ball bearing axles.



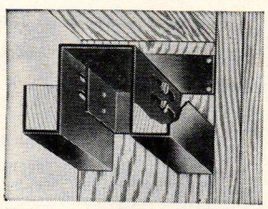
Left: Wood filler strips in metal frame allow plaster base, stops and trim to be nailed or screwed in usual manner.

Write Dept. E-1

Prefabricated and complete in one package. Includes famous Kennatrack Series 400 heavy duty track assembled to header at factory, with hangers in place. Can be installed on the job in 25 minutes.

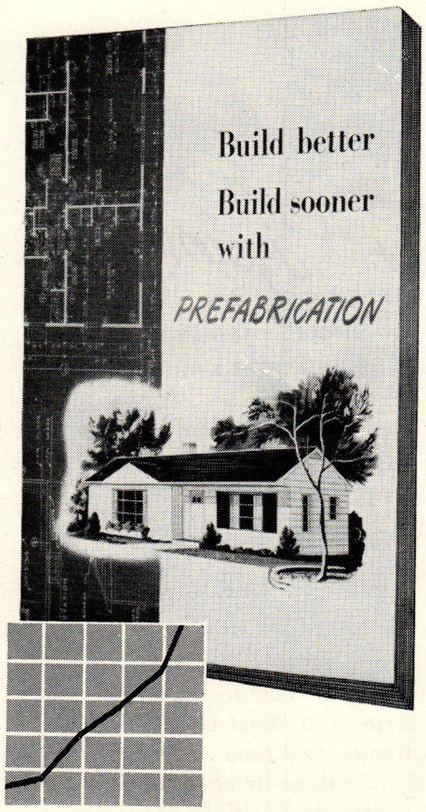


Split jambs and supports also provide 1" adjustment for height.



Header adjustable two ways: (1) Pocket end allows ¾" horizontal adjustment to fit rough opening; (2) Jamb end permits ¾" vertical adjustment.

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ELKHART, INDIANA
JAY G. McKENNA (Canada) Ltd., 104 Jarvis St., Toronto, Canada
SPECIALIZING EXCLUSIVELY IN THE MANUFACTURE OF SLIDING DOOR HARDWARE



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Spells Opportunity!

Construction of Prefabricated homes continues to show increases in its rate of gain compared with total home building. The swing is unmistakable. Find out *now* how Prefabrication answers man-power and material shortages, why it meets housing needs quickly, economically and profitably. Write for FREE booklet, "Build better—build sooner."

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COMPLETE QUICKER
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REPORT FROM PADUCAH: Defense housing program brought forth a mouse in '51, but prospects look better for '52

Because Paducah, Ky. shares with the Savannah River area in South Carolina the distinction of being the oldest "critical defense housing area" in the U. S. (designated March '51), the success or failure of the housing program there indicates what many of the nation's 140 other defense areas can expect as they wrestle with their housing problems. At the turn of the year, HOUSE & HOME *Correspondent Bob Schulman submitted this report on Paducah's progress and problems:*

In the mid-December week when Paducah, Ky. observed the first anniversary of the news that its area was to be the site of a $500 million AEC gaseous diffusion plant, one native looked over his town and sighed, "It reminds me of an old patched-up, inner tube that's been overinflated."

The population of McCracken County, in which Paducah is the chief city, had skyrocketed from its 1950 level of about 49,000 to somewhere near 75,000. Of this total, at least 40% was new to the area. Some 15,700 construction workers were on the payroll of F. H. McGraw & Co. of Hartford, Conn., building the AEC plant. Union Carbide & Carbon Chemical Co.,which will operate the installation for AEC, already had 800 employees on the scene. Some 2,600 more were at work building a TVA power plant, and an equal number laboring for a private utility combine on a second steam plant across the Ohio River at Joppa, Ill. Nobody knew how many other people had come to the Paducah area to work in the 109 new business ventures launched during 1951.

Piracy rents. At least half of McGraw's in-migrants are living in more than 3,000 trailers along the highway between Paducah and the "A-tomic plant," the rest in ugly flat tops, barracks or in Paducah itself in rented rooms, often paying piracy rates (rent control was reimposed in September, hasn't yet been effectively enforced). County officials, unable thus far to win a test case necessary before taking action against poor sanitary conditions in the trailer areas, reported also some 60 miles of near-plant roads destroyed by truck and auto traffic.

Local homebuilders said they were still virtually stymied by an unexpected FHA order late last July which put the hex on any home construction involving septic tanks. They also were unhappy about high labor costs, continuing scarcity of mortgage money, inconsistencies between FHA and Paducah city building requirements, disparity between FHA appraisals and sales prices, difficulty in finding buyers able to raise the cash difference between appraisal-based loan and sale price. They professed to find little relief in the downpayment relaxation terms of the Defense Act.

For many of these reasons, several Paducah builders confessed their own unhappiness with their products, mostly houses of unoriginal design selling in the $10,000 to $12,250 range with square footage averaging about 850′ for a two-bedroom unit and about 975′ for three-bedroom units. Said Builder Roger Christie: "People are not getting what they want or what they need. And we're unhappy at the product we're offering at prices we have to charge."

Overloaded facilities. Paducah civic leaders fretted about traffic-clogged streets, overtaxed water and sewerage facilities. Said Druggist John Oehlschlaeger, chairman of the civic committee of Paducah's chamber of commerce: "The growth's been heaped on us too fast. Housing prices are too high, community facilities are too scarce and outside aid is too slow in coming. We've got to get relief from some source."

Wrote Publisher Edwin J. Paxton of the Paducah *Sun-Democrat:* "The one reason why more homes and apartments have not been built is that builders must take too much risk and are not offered sufficient inducement to invest their capital."

Whose fault? Has private enterprise been falling down on the Paducah job, has government failed to entice it into effective action by a failure to reduce the risks to reasonable proportions?

Until very recently, the general concensus in Paducah has been that this was true, despite a feeling that state and local FHA and HHFA officials were being earnestly co-operative, doing their level best to represent the urgency of Paducah needs to Washington.

The goal for Paducah for '51 was 500 programmed rental units, 500 units for owner-occupancy. As of Dec. 1, Kentucky State FHA Director Patterson (Pat) Walker, reported these figures:

No programmed rental units, but 468 commitments on for-sale houses, of which Walker said "75 to 80%" were completed and occupied. The last half didn't look too discouraging. But in his homes-for-sale accounting, Walker admits he failed to reckon with an estimated 125 commitments canceled out by his Washington headquarters when it belatedly pronounced McCracken County soil, on the basis of percolation tests, generally

(Continued on page 48)

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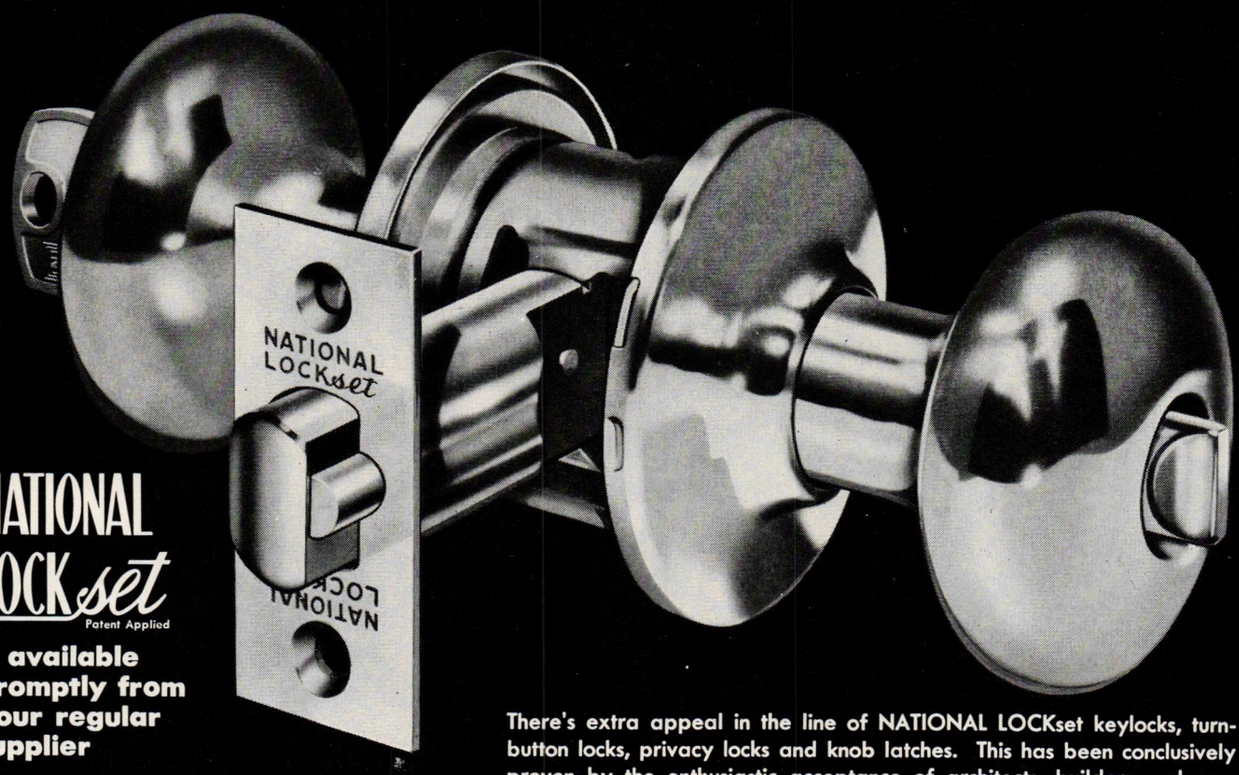
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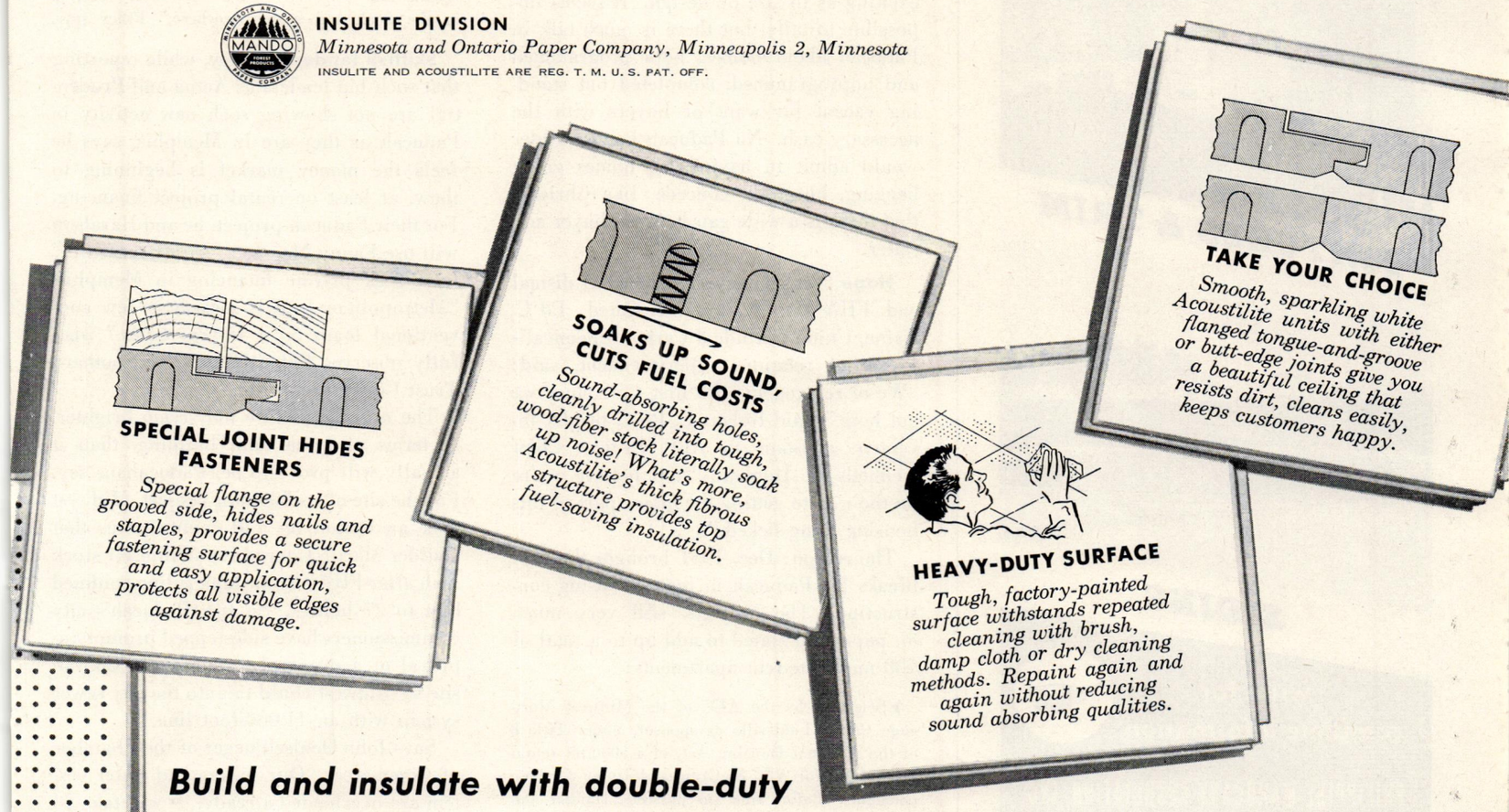
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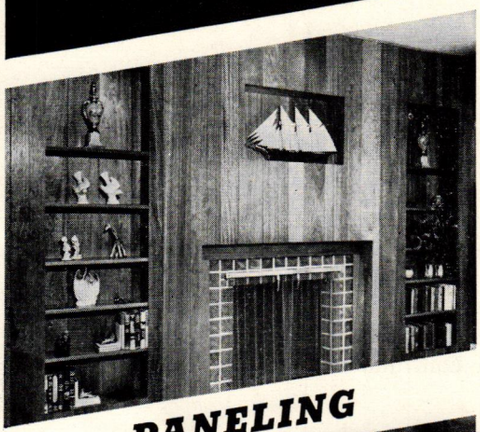
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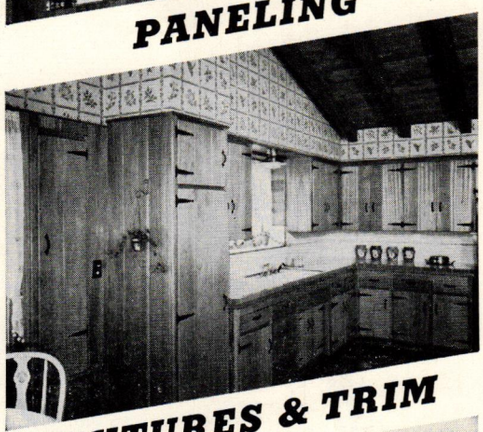
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REPORT FROM PADUCAH:

unfit for septic tank sanitation. This cut the number of programmed for-sale commitments down to 343. Of these, 160 were occupied, 66 under construction. Of the total occupied, *less than 60* were sold under relaxed credit to defense workers.

This could mean either that others were purchased by defense workers who found the credit relaxation not a sufficient saving to bother about—or it could mean, as Developer Christie suggests, that the young technicians now coming to Paducah as permanent AEC-plant personnel are clinging to their cramped rental quarters because they can't find what they want in the housing offered, or can't raise the necessary down payment.

"Most of these kids can't make any more down payment than their moms and dads can lend them," says Christie sadly. "I've been 90 days finding a man with a $4,100 down payment on a $12,850 house FHA appraised for only $10,250."

Gov't plans only half. Estimates vary on the extent of unprogrammed home building. Walker puts the total at 150; Glenn Lovern, HHFA area representative, sets it in excess of 300. While some of these fall into the same range as the programmed housing, most—completed or abuilding—are in the $15,000 to $25,000 range, unexciting as to size or design. It seems impossible to tally, but there is much talk in Paducah about homes, both programmed and unprogrammed, completed but standing vacant for want of buyers with the necessary cash. No Paducah home builder would admit to having *his* homes going begging, but most concede, like Christie, that there is a wide gap between buyer and seller.

Hope. Yet, as the year reached its dismal end, FHA Man Walker was elated. Ed C. Caine, Union Carbide & Carbon Chemical's industrial relations superintendent, said: "We're relaxed for the first time since we got here." Said Robert E. Rose, bright, inventive assistant to AEC Project Chief Kenneth A. Dunbar: "We believe we're on the way to getting the major part of this housing thing licked."

The reason: Dec. 1951 brought the first breaks for Paducah in rental housing construction. The projects, still very much on paper but slated to add up to a total of 788 moderate-rent apartments:

▸ Selection by the AEC of the Midwest Mortgage Co. of Louisville as sponsor, under Title 8 of the National Housing Act, of a 500-unit rental subdivision for AEC-McGraw and Union Carbide personnel. Before this was possible, Dunbar and Rose had to take steps early this fall to get AEC qualified to benefit under Title 8 (the Wherry Act). Authorization came Sept. 1. Bypassing, in the interests of time, the complicated bid procedure used by the military (Rose says a study showed that of 25 military cases, 13 took an average of seven months before construction began), AEC in Paducah sought guidance from Pat Walker of FHA, invited 10 area builders in to discuss the proposition, picked Midwest. Midwest's chief recommendation: its construction of 1,000 Wherry Act rental units at Fort Knox. In Paducah, Midwest plans to spend $4 million on 350 detached single family and 150 multi-family units of asbestos and wood siding. Estimated monthly rental for a two-bedroom (950 sq. ft.) apartment or house: $85. Financing: by Chase National, the Bank of Miami (Fla.) and Citizens' Fidelity of Louisville. Scheduled completion: five months from start of construction.

▸ Approved by FHA: construction, under section 207, of 22 frame walk-up units to contain 34 two-bedroom apartments (840 sq. ft.) that will rent for between $65 and $75 monthly. The builder is 34-year-old Walker Hall, of Louisville. He hopes to have most of the apartments ready for occupancy by June. Financing: by Guaranty Mortgage Co., Memphis.

▸ Filed with FHA in Louisville: proposal by radio station owner W. Prewitt Lackey of Paducah, in association with Omer Goetz of Evansville, to build under section 903 of the National Housing Act 76 Gunnison duplexes, slated to provide 64 two-bedroom units (816 sq. ft.) to rent for $75 monthly and 12 three-bedroom units to rent for $85.

▸ Filed with HHFA: an application by the Memphis firm of Jack Haralson and J. W. Pilley to build 128 two-bedroom rental units under Title 9. Last year Haralson and Pilley abandoned a similar rental project because of absence of a crutch like Title 9. "We'd tried every section in the book and gotten nowhere," Pilley says.

Skittish lenders. Pilley, while reporting that such big lenders as Aetna and Prudential are not showing such new activity in Paducah as they are in Memphis, says he feels the money market is beginning to thaw, at least on rental project financing. For their Paducah project, he and Haralson will use Fanny May as a "safety measure," later seek private financing in Memphis. "Metropolitan Life is making a few conventional loans on a 15-year basis," wistfully observes Robert Rawls, of Southern Trust Co. of Louisville.

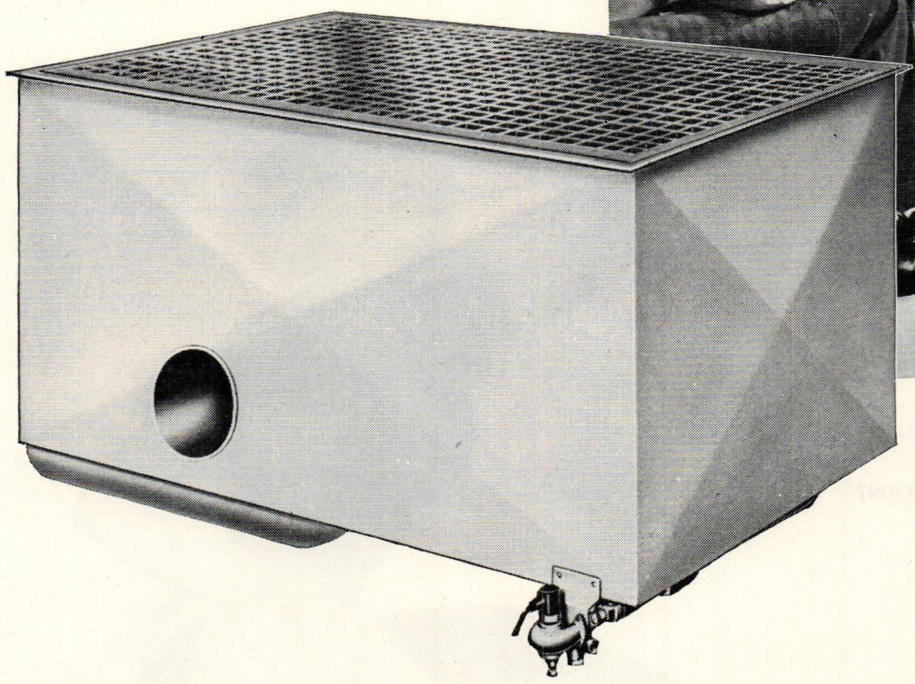
The over-all picture may seem brighter, in terms of rental unit building, than it actually will prove to be, Paducahans say. For the site of its 500-unit project, Midwest took an option on 140 county acres that Builder Martin Conrad found himself stuck with after FHA's septic tank ruling confined him to 27 houses. So far, Paducah's city commissioners have sidestepped prompt approval of a proposal to annex the Conrad site so Midwest could tie into the city sewer system with an 11,000-foot line.

Says John Oehlschlaeger of the Chamber of Commerce: "Our sewers and water system are overloaded already. It will take $3 million alone to put the sewers in shape for substantially increased usage, and our water

(Continued on page 52)

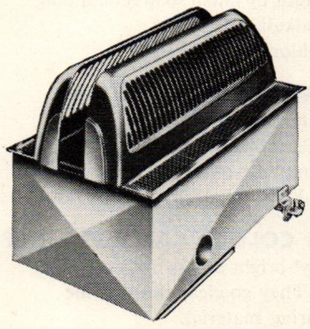
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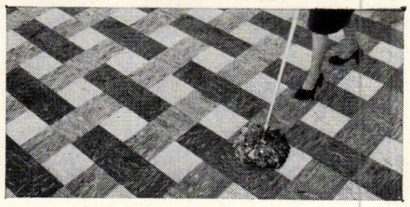
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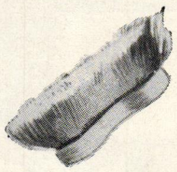
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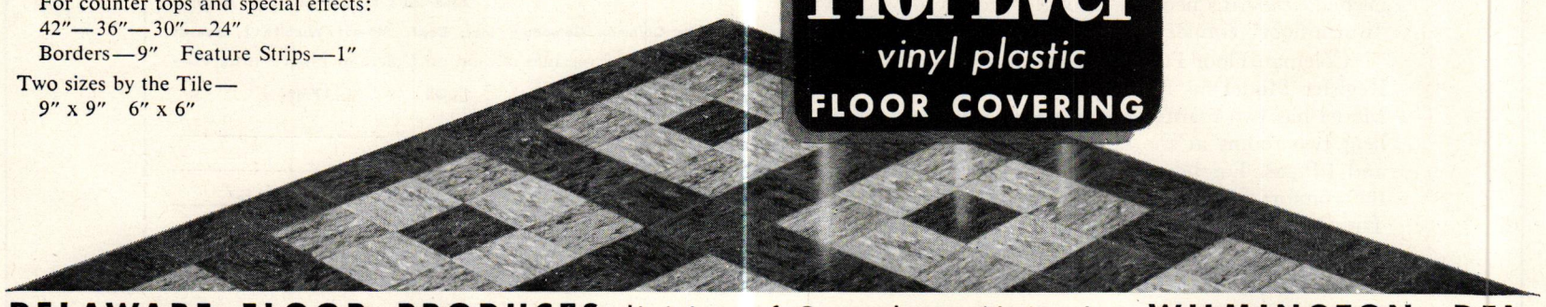
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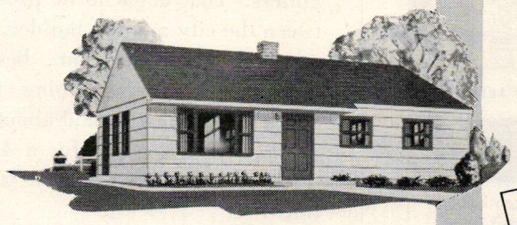


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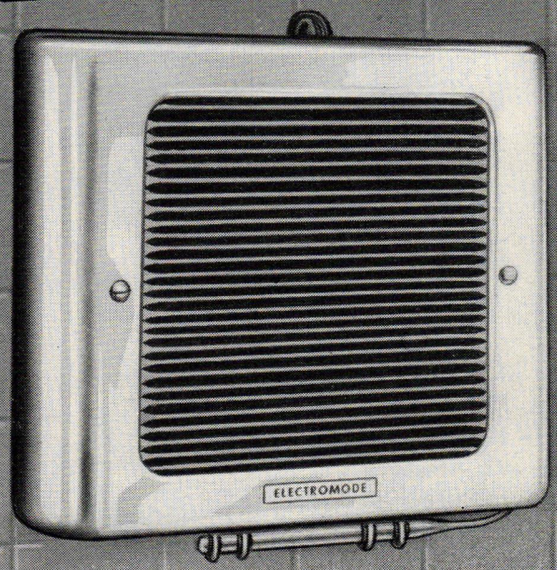
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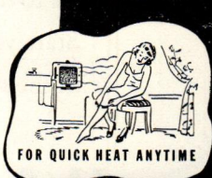
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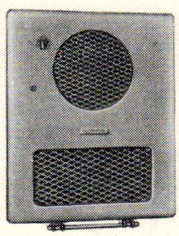

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REPORT FROM PADUCAH:

commission needs at least a million. It'll be a long time—years—before the city benefits in revenue from the boom."

Reluctant officials. Paducah's Mayor Stuart Johnston agrees with Oehlschlaeger, waves aside the report of an Indianapolis engineering firm pronouncing the city sewer system in shape to take a load like Midwest's. "If we're to move ahead, Washington's got to move along with us," says the mayor, who represents a shoe firm in Paducah, Thus far, he notes, Washington's chief contribution by way of aid in community problems has been the allocation of more than $750,000 for operation of temporary school facilities. Paducah did its local share last November, when its citizens overwhelmingly approved a $2.5 million bond issue for five new schools. Also, Paducah is currently building its first new fire house in 40 years.

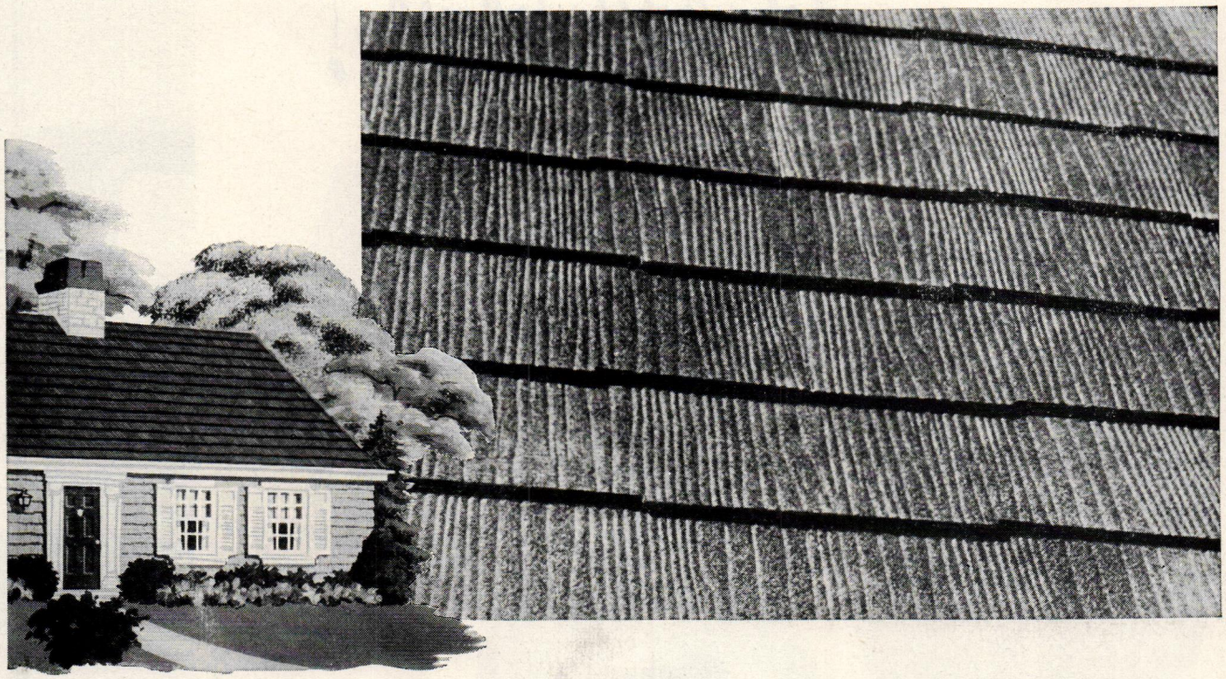
Says Carbide's Ed Caine: "I didn't think they would, but it does look as though enough of our transferees from Oak Ridge and elsewhere have gotten into houses to tide us over. They're a little uncomfortable, and strapped for cash, but they're doing all right. But beginning in March we'll have to begin recruiting at least 250 skilled mechanics from other areas for work here. They'll want to know about places to rent. We'll be able to use rental units as fast as we can get them. I hope things are stirring."

Costs rise. Builder Conrad says costs (labor and materials combined) have risen another 10% since last summer. Plastering is up to $2 a yard. "And we still have to compete with the government for manpower," he adds. "You've just about got to work 'em time and a half on Saturday, to keep 'em with you. Besides, some of the best workers are out at the plant and we builders get the inefficient leavings." Says Builder Christie: "Another thing that pushes up the price is the cost of off-site improvements, such as curbs, streets and gutters. That ought to be pro-rated as between the city and the builder, but the city seems not to give a damn. Besides, FHA's requirements for stuccoing foundations, shutters, other extras add about $100 to the price. The FHA asks for a 42″ walk, 4″ thick, but the city wants a 60″ walk, 5″ thick."

Adding it all up, the way has been cleared for effective action in the rental realm, but in the field of homes for sale, industry and government have moved convulsively and brought forth a mouse—a messy, costly mouse at that, which builders "adjust to" but can hardly brag about.

American Colonial

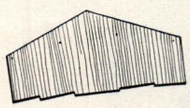
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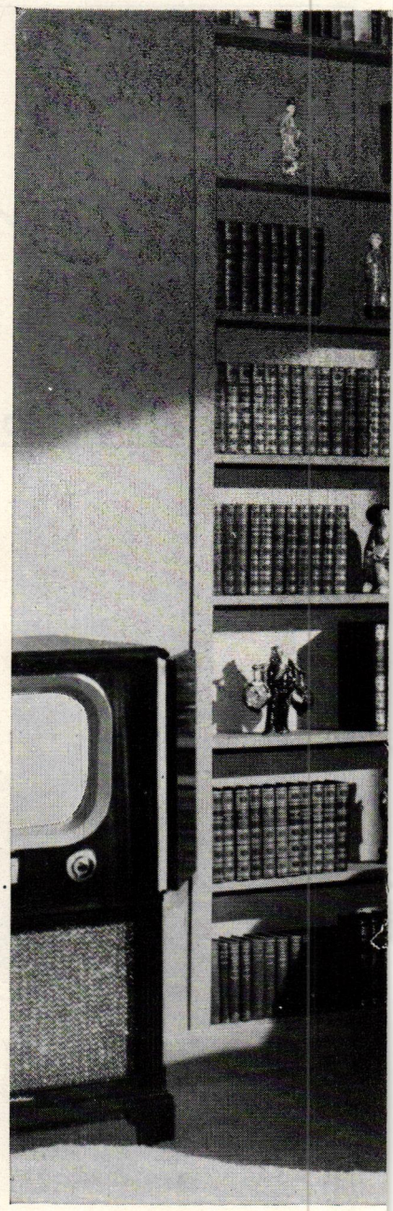
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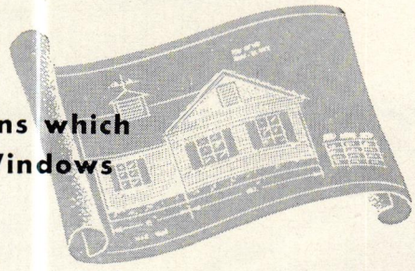
Johns-Manville JOHNS-MANVILLE JM PRODUCTS

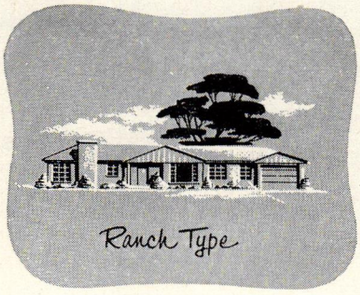
CECO WINDOWS

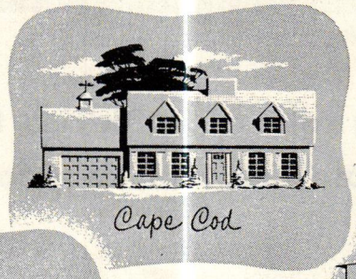
at home — in any home!

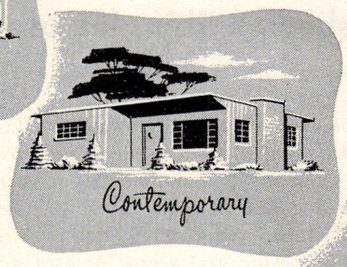


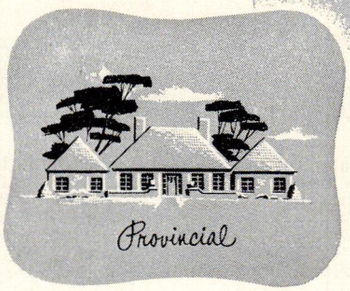
Here are 5 of many architectural home designs which are enhanced by Ceco Windows













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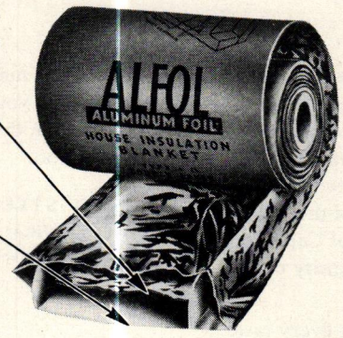
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LETTERS

THE CASE FOR THE WIDER LOT

When HOUSE & HOME *surveyed the case for—and against—the wider lot (H & H, Jan. '52) letters in favor were too many to print. Typical of the reactions to the problem are these.*—ED.

Sirs:

I would suggest that we have found that lots with 57½′ to 60′ frontage are far more desirable for houses in the $8,000 to $15,000 price range. Standard homesites were once 50′ x 140′ lots. These were usually developed in a block of 600′ frontage and 300′ depth, with the street on each of the four sides and a 20′ alley. In utilizing the same amount of ground, lots of 60′ frontage and 110′ depth with 5′ to 7′ utility easement in the rear will produce two or three more lots that are far more desirable for present day tenancy.

S. CHESTER DAVIS
Chester Davis Co.
Oklahoma City, Okla.

Sirs:

The problem of front and side yards is quite complicated. Until recently, it was generally accepted that the greater the depth of the front yard, the higher the class of neighborhood you were creating . . . Probably the original idea was that if you set your house farther back from the street, you would be less annoyed by the dust raised by carriage wheels and horses' hoofs. With the passing of the horse and the coming of dust-free street surfaces, this reasoning has lost its original cogency. Add to this the very sensible change in architectural design which places living rooms at the rear of the house and the use of acoustic insulating materials to screen off street noises, and our reasons for excessive yards are disappearing.

There still remains one good reason for insisting on some setback: to avoid excessive costs if the street is ever widened. There is a delicate legal point involved here concerning the taking of property by a public agency without just compensation to the property owner. In many jurisdictions, this reason must not be breathed, but we should recognize that it still exists.

The need for side yard requirements is based quite clearly on the need for assuring light, air and protection from exposure to fire hazards. Twenty years ago it was felt that a lot 40′ wide afforded enough area to build an adequate house and to provide adequate side yards. This width was pretty widely accepted as the minimum in subdivision regulations. Without making an actual survey, I would guess that 60′ is today the most commonly used figure.

About three years ago, I helped write subdivision regulations for the new town of Park Forest, south of Chicago. We used 65′ as a

(Continued on page 60)



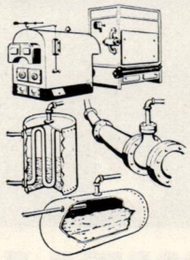
You're ahead 4 ways when you

SPECIFY SERVEL

AIR CONDITIONING EQUIPMENT

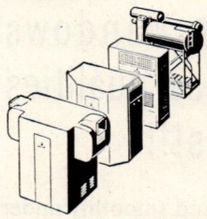
EXCLUSIVE ADVANTAGES OF SERVEL "ALL-YEAR" AIR CONDITIONING MAKE IT YOUR BEST CHOICE FOR TODAY—AND FOR THE YEARS AHEAD!

1 Use existing steam lines to operate Servel at low cost!



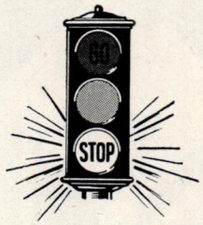
Servel air conditioning units can be connected to any present source of steam to give you air conditioning at nominal cost. Servel "All-Year" Air Conditioners also operate on gas, oil, LP gas, waste heat, or steam from any source, at any pressure. With this multiplicity of fuels, Servel lets you choose the most economical energy source for any installation.

2 Servel has the model to do all jobs better!



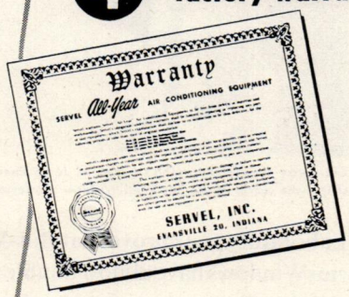
Do you have a factory problem that could be solved by the use of chilled water in one of the processes? Servel has the unit to remedy it! What do you want to air condition . . . a factory space, a store, an office? Servel has the unit or combination of units to provide economical air conditioning how and where you specify it! You may have cooling only . . . a year 'round combination of heating and cooling . . . or combination units for vibration-free multiple floor air conditioning.

3 Servel "no moving parts" design cuts maintenance costs!



Operating on the famous absorption principle, Servel units deliver quiet, continuous, vibrationless operation at peak performance . . . year after year . . . and, because there is nothing in their cooling systems to wear out, require a minimum of maintenance! Operating within a vacuum—they are absolutely safe.

4 Servels have a five year factory warranty



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What customers want in a window . . . .

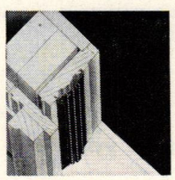
1. Complete weathertight protection!

2. Easy sliding windows at all times

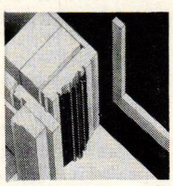
Build Well with BILT-WELL WOOD WORK REG. U.S. PAT. OFF.



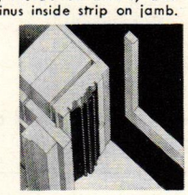
Cut-away view of Bilt-Well's exclusive Jamb-liner and weather-strip—the secret of the Bilt-Well Window's superiority



25/32" outside sheathing and ¾" lath and plaster on 2x4's—and Superior full width jamb.



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½" outside sheathing and dry-wall (⅜" or ½") inside on 2x4's, cut-off rib on blind stop and remove inside jamb strip.



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SUPERIOR Windows have *both* these qualities . . . plus!!!

Laboratory tests prove that Bilt-Well Superior Windows have almost double the weathertight efficiency required by the American Wood Window Institute's specification.

Here's why. The patented Superior Jamb Liner is flexible which means it automatically takes care of expansion and contraction.

And because this problem of expansion and contraction is taken care of, windows fit snugly but slide easily and smoothly under all conditions without the annoyances of sticking and rattling. This unusual ease of operation is also due to the truly counterbalanced sash by overhead spring balances.

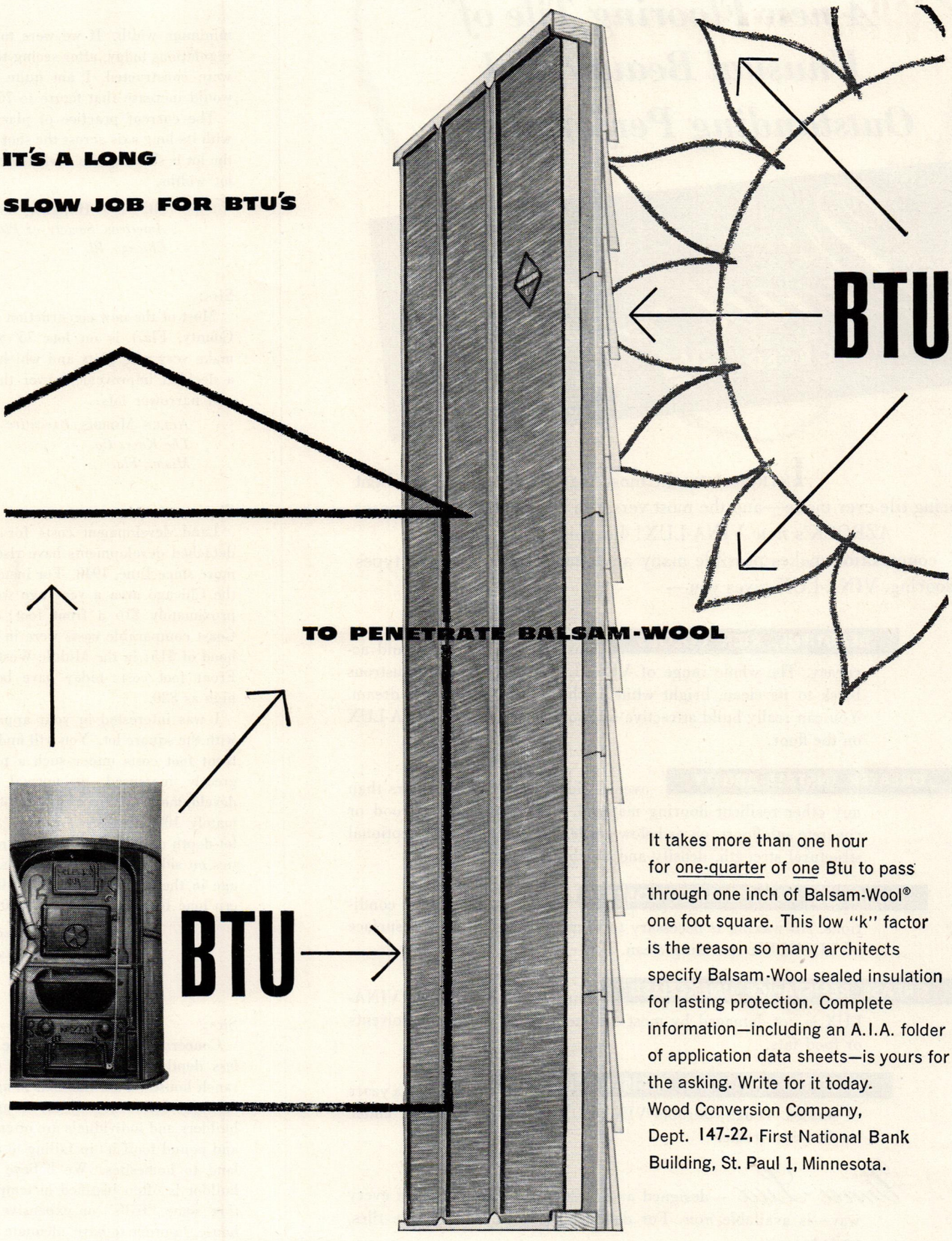
There's special news, too, for you who are so closely connected with the building industry. Bilt-Well Superior Windows are now made adjustable to various wall thicknesses. See illustrations.

CARR, ADAMS & COLLIER CO., *Dubuque, Iowa*

Here's a list of the BILT-WELL LINE • *Superior Unit Wood Windows* • *Exterior & Interior Doors* • *Entrances and Shutters* • *Clos-tite Casements* • *Carr-dor Garage Doors* • *Basement Unit Windows* • *Louvers & Gable Sash* • *Combination Doors* • *Screens & Storm Sash* • *Corner (China) Cabinets* • *Ironing Board Cabinets* • *Mantels & Telephone Cabinets* • *Nu-Style & Multiple-Use Cabinets* • *Stair Parts*

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BEAUTIFUL, RICH COLORS unsurpassed for clarity and accuracy. The whole range of VINA-LUX colors from its lustrous black to its clean, bright white is the interior designer's dream. You can really build attractive interiors when you use VINA-LUX on the floor.

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LETTERS

minimum width. If we were to rewrite those regulations today, after seeing the houses that were constructed, I am quite sure that we would increase that figure to 75′.

The current practice of placing the house with its long axis across the short dimension of the lot is showing the obvious need for greater lot widths.

DENNIS O'HARROW, *Assistant Director*
American Society of Planning Officials
Chicago, Ill.

Sirs:

Most of the new construction now (in Dade County, Fla.) is on lots 75′ x 100′, which make very nice plots and which we think are a decided improvement over the old smaller and narrower lots.

ALLEN MORRIS, *Executive Vice President*
The Keyes Co.
Miami, Fla.

Sirs:

Land development costs for single-family, detached developments have risen by 50% or more since June, 1948. For instance: Costs in the Chicago area a year ago were up to approximately $16 a front foot; on the West Coast comparable costs were in the neighborhood of $15; in the Middle West, around $13. Front foot costs today have been stated as high as $20.

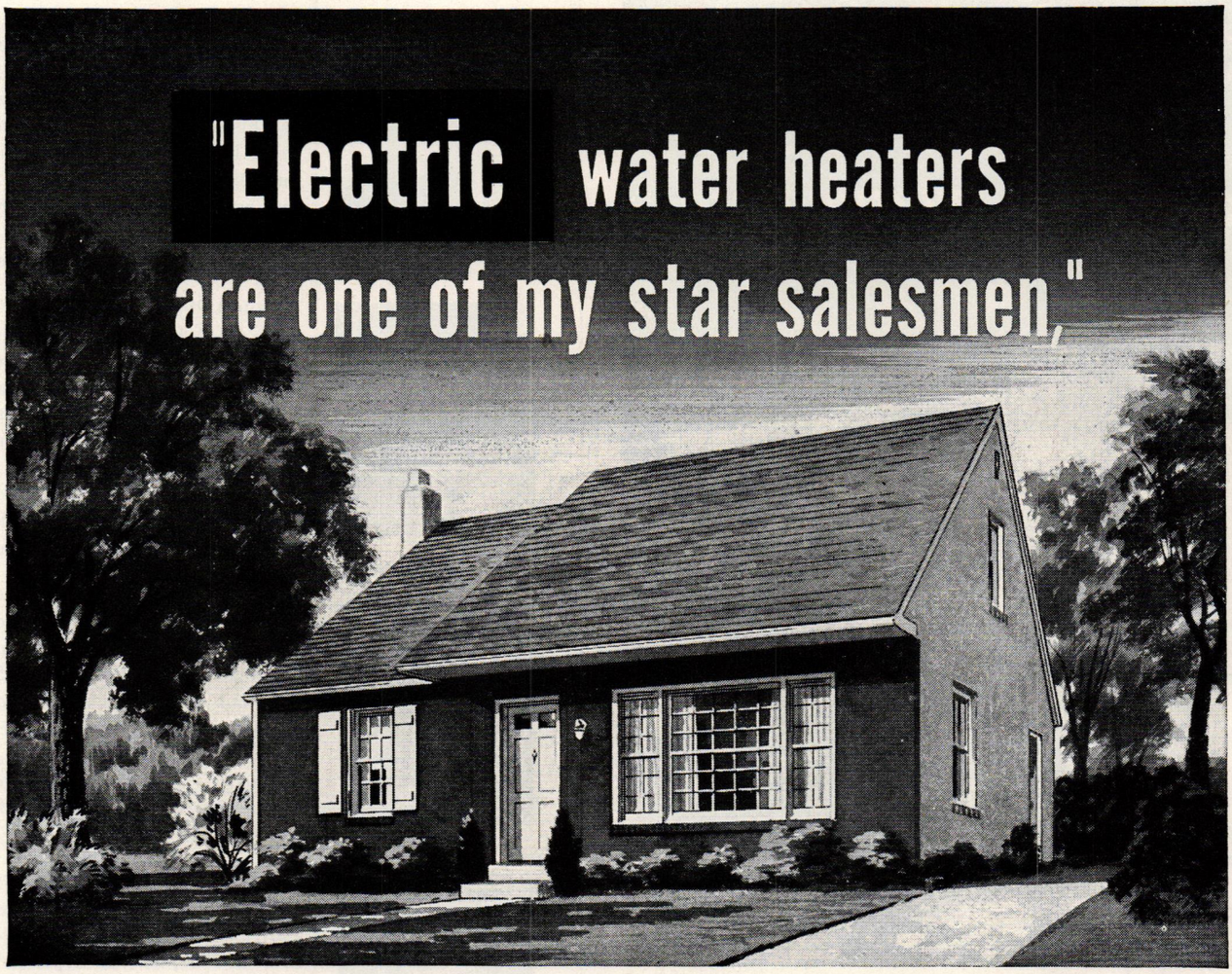
I was interested in your apparent concern with the square lot. You will find, I think, that front foot costs under such a plan would be greatly increased, as normal single-family development will require a lot of approximately 100′ deep in any case. Reduction of lot depth only has the effect of reducing utilities on side streets, which is a small percentage in the total, particularly where the modern long block of 1,200′ to 1,800′ is used.

MAX S. WEHRLY, *Executive Director*
The Urban Land Institute
Washington, D. C.

Sirs:

Concerning homesites of more frontage and less depth, on account of the popularity of ranch houses, I am inclined to agree that this is a very sound idea. In my opinion, operative builders and individuals are often "penny wise and pound foolish" in failing to allocate more land to homesites. We believe that a home builder is often justified in temporarily omitting some "frills" or expensive details in a house, in order to have adequate land, making possible more enjoyment of trees, flowers and privacy. We have so often seen homeowners disappointed when someone built on either side of a small site, thus destroying privacy and depreciating the value of the house.

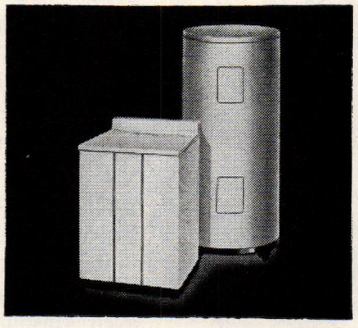
ROBERT JEMISON JR., *President*
The Jemison Co.'s
Birmingham, Ala.



These Rhodes houses in Media, Pa., were priced at $8,900. Mr. Rhodes lays a major part of his success to the electric appliances which he includes—the Electric Water Heater, as well as electric range, dishwasher sink and refrigerator.

says Pennsylvania builder SAM RHODES

"When I sold 45 houses without any effort," says Mr. Samuel M. Rhodes, Jr., of Media, Pa., "I realized I must be including some features that were star salesmen. One of them was the *Electric* Water Heater. Customers just naturally take to it. I explain how installation is made in the most efficient location, because there's no flue or vent. I point out how one result is short hot water lines, and how they keep down radiation losses. People also like the economy of the *Electric* Water Heater due to its fully insulated tank—and the fact that it's built to last a long time, and gives them all the hot water they need, whenever they need it. The clincher is that the *Electric* Water Heater is fully automatic."



Equip Your Homes with

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THEY'RE WHAT PEOPLE WANT!

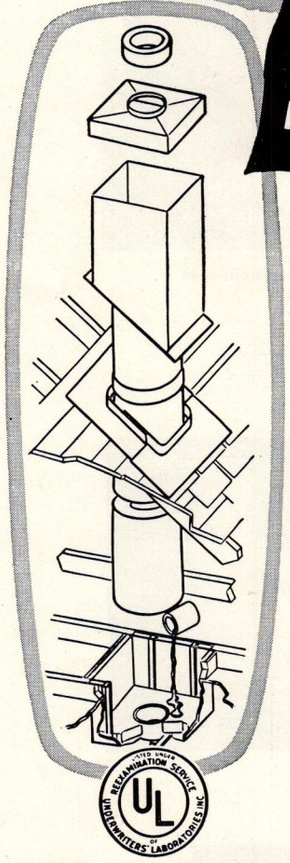
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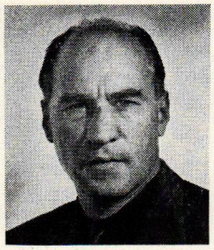
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Van-Packer CORPORATION

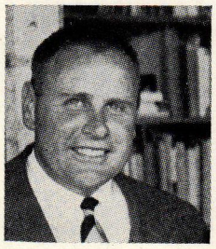
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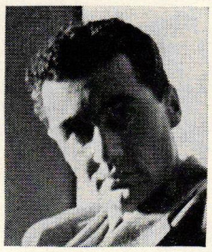
BEHIND THE BLUEPRINTS



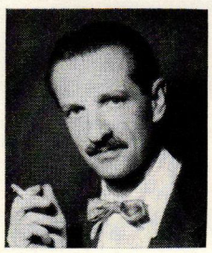
RAPHAEL SORIANO, 44, was born on the Island of Rhodes in the Aegean Sea, came to America in 1924 and worked his way through architectural school at U.S.C. Since 1934, he has had his own architectural practice in Los Angeles, has won numerous awards for his distinguished houses and stores. Soriano's current preoccupation with steel-framed houses has produced several residences and a well-detailed, ten-unit apartment house (p. 67).



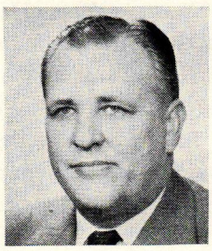
Architect **DONN EMMONS,** 41, of Wurster, Bernardi & Emmons, graduated from Cornell ('33) and advanced from depression jobs as laborer and designer of streamlined truck bodies to a Los Angeles architectural office. In 1938 he migrated to San Francisco, joined William Wurster, and became a partner six years later. The office's distinctive portfolio of Bay Region houses includes the trio of balconied homes published this month (p. 74).



Architect **MARIO CORBETT's** father before him was an architect, and a friend of Stanford White's. Mario was trained at his father's drafting table, at the California School of Fine Arts and in Europe, first on holiday junkets and later on a traveling scholarship. He now designs houses with a strong, regional modern character (p. 79) that is a clean and complete break from his father's Beaux Arts indoctrination. He practices in San Francisco.

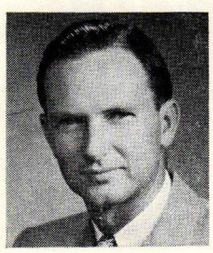


New York Architect **GIORGIO CAVAGLIERI,** 40, was born in Venice and educated in Milan and Rome (1927-1932). Upon coming to the U. S. in 1939, he was surprised to find America still choosing between two types of architecture (traditional and modern), for his Italian training and practice included only the contemporary. During World World II he rebuilt hospitals with the Army Engineers from Normandy to Berlin and received the Bronze Star. The remodeled farmhouse in Connecticut (p. 82) is a postwar project.





SYLVANUS G. FELIX and **JOHN J. GRIFFIN** are practicing attorneys and tax counsellors in Oklahoma City. An ex-football hero, Felix, 41, holds twin degrees in accountancy and law, builds 200 houses a year, practices law, lectures and writes extensively on housebuilding tax problems (p. 106). Griffin, 37, is also a lawyer-accountant, builder and tax editor.



Thirty-four-year-old Architect **NED COLE** designs for builders, fabricates wall storage units and builds houses for his own account in Austin, Tex. to illustrate how his design details look, work and pay off. Cole is an architect (University of Texas, 1939) with a sharp eye for builders' costs (p. 116), has taken postgraduate courses in accounting to supplement his design training.



Street of new homes in Searlhurst Subdivision, Cuyahoga Falls, Ohio.
"Century" Siding Shingles used on all 166 homes in this project.

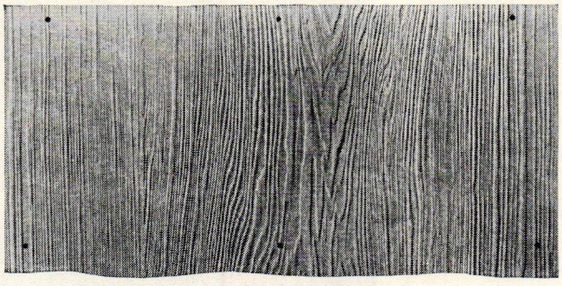
ARCHITECTS: Firestone & Cassidy
CONTRACTORS: Heslop Building & Realty Company

Color . . . protection . . . beauty . . . economy . . .

four reasons why it is easier to sell houses sided with

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"Century" No. 57 Siding Shingles give low-cost coverage because of large unit-size.

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Consider the colors: Smart . . . attractive . . . reflecting up-to-the-minute color preferences! The "Century" colors—SHELL WHITE, SUN-GLO BUFF, SEA GULL GRAY, and FATHOM GREEN—give you a range to meet every owner's ideas on architectural appeal, distinctive styling, and harmony with surroundings; let you build harmonious variety into multiple-unit developments if that's your problem.

The protection is broad: "Century" Shingles protect against weather; won't rust or rot; resist rodents and termites; *will not burn*. There's a real sales story in the protective qualities of "Century" Siding Shingles!

Beauty is built in: "Century" colors are built right into the shingles—they can't weather out. The deep cypress graining—a permanent part of the "Century" surface—gives authentic appearance of weathered wood; adds to the beauty and charm of any home. Butt lines can be either straight or wavy to suit customer's preference.

PLUS two-way economy! First, "Century" Shingles are moderate in initial cost, and the large (12" x 24") shingles are quick, easy, and inexpensive to apply. Secondly, there's virtually no maintenance cost on "Century" Shingles—they don't even need protective painting to keep their beauty through the years!

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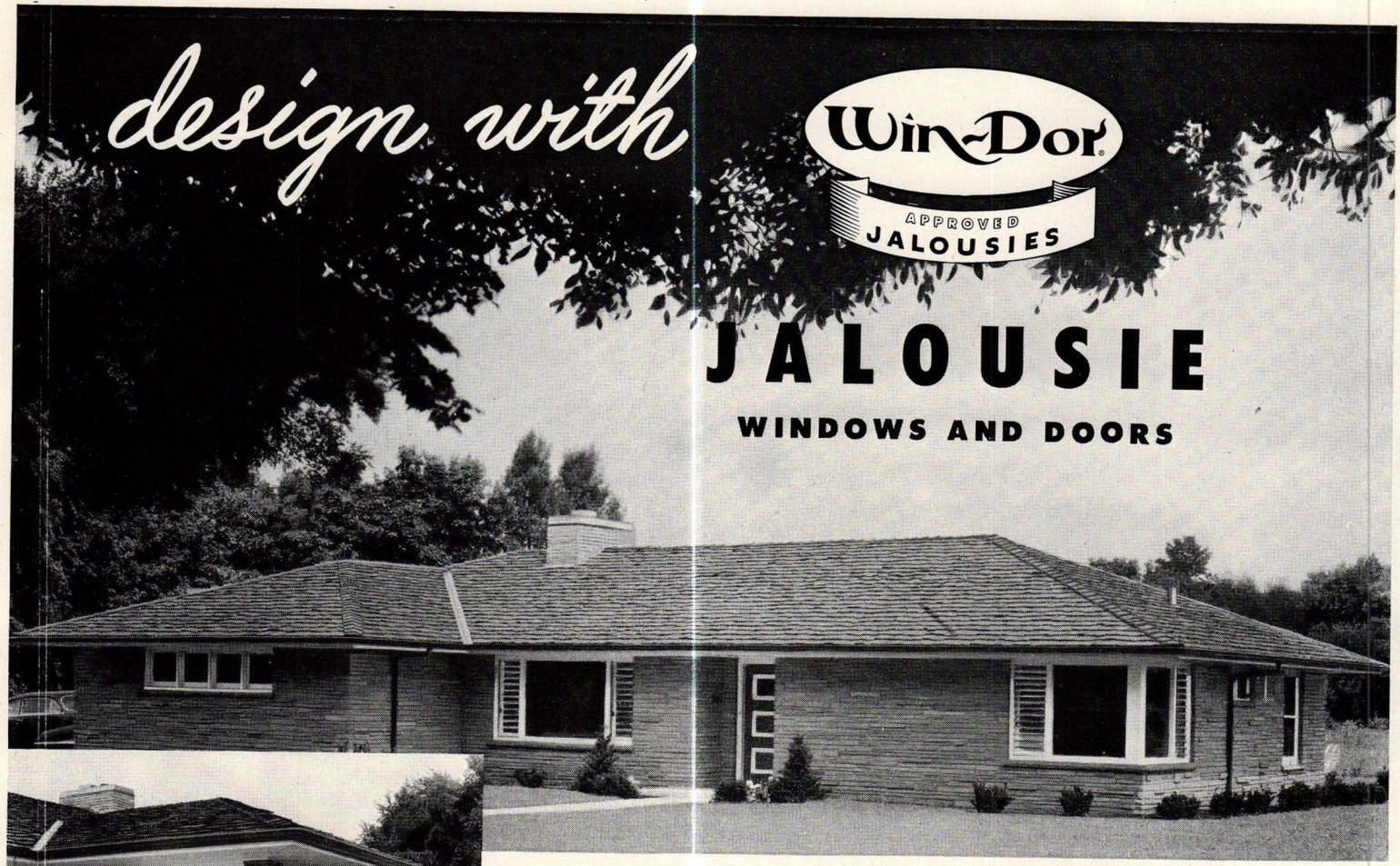
Original manufacturers of Asbestos-Cement Shingles in this Country

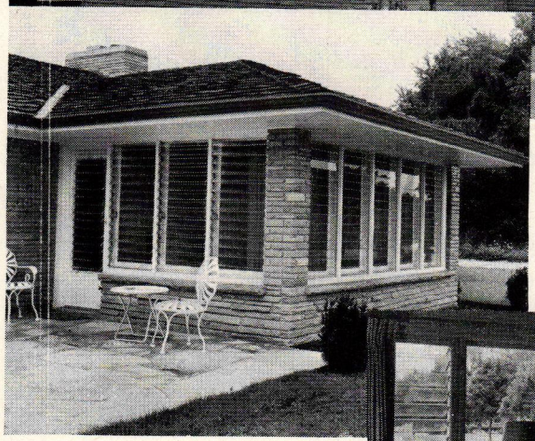
design with

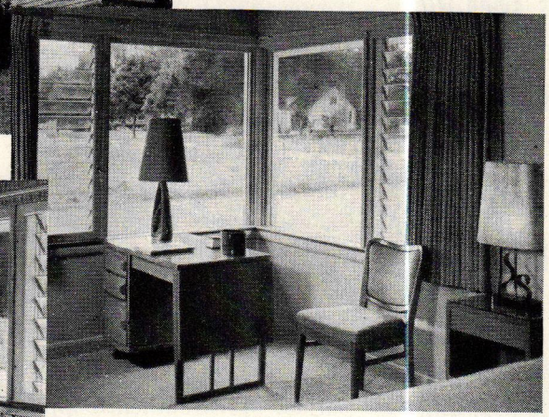
Win-Dor
APPROVED
JALOUSIES

JALOUSIE

WINDOWS AND DOORS







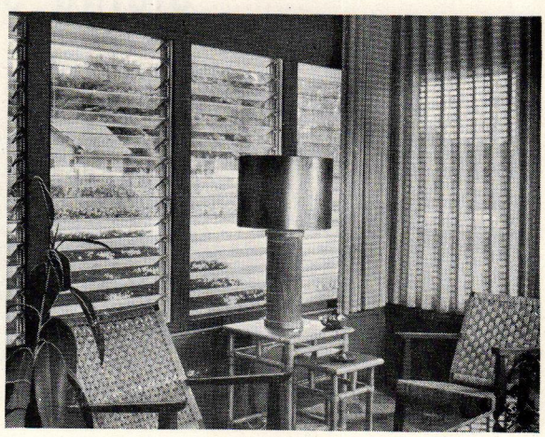


For convenience in kitchens, Win-Dor Jalousies are ideal.

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Again, Win-Dor sets a new architectural standard of quality in the Win-Dor Jalousie window. In this modern home of Mr. and Mrs. John H. Gross in Elgin, Ill. Win-Dor Jalousies have been used as primary windows; units of precise engineering incorporating the famous Win-Dor operators and patented Win-Dor hardware. Only Win-Dor Approved Jalousies offer these advantages . . .

1. Fast and convenient controlled ventilation of the full window area.
2. Automatic locking in any position with removable handle control.
3. Bracket design that prevents glass vibration.
4. Installation as easy as standard windows.
5. Patented hardware with stainless steel weatherstripping for full weather protection. Tests by recognized laboratory indicate low air infiltration rate. Detailed report on request.



★ See Sweet's—Section $\frac{17a}{CA}$ for complete ★ details and specifications.

Win-Dor Approved Jalousie windows are a product of the Casement Hardware Co., manufacturers of the Win-Dor Casement Window hardware famous for quality since 1906.

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Cutbacks, copper, confusion—and NPA

The copper shortage has caught up with home building.

Manly Fleischmann's threat to cut 1952 starts back to 600,000 at least served one good purpose, before Ray Foley intervened to offer a more sense-making plan. His threats made everyone face up to a shortage that is far too real to be wished away or talked away any longer.

Home builders have had plenty of warning. Thirteen months ago NPA's John Haynes told them bluntly that copper would be the toughest shortage of all for them, and the home building experts at THE MAGAZINE OF BUILDING Round Table to cut construction waste answered right back that, for all copper's many advantages, "it should still be possible to build just as good a house with 75% less copper." They added that "an all-out attack on waste could save more critical materials than could be saved by a drastic further cut in housing starts."

But month after month NPA gave only lip service to the conservation program, and as late as last fall builders had very little incentive and no compulsion from Washington to change the way they had always used copper. On the contrary, builders who used less than their copper quota were charged with its full use anyhow; builders who could get more copper out of inventory were free to overrun their quotas. And so the needless use of copper continued.

Millions of pounds of copper were buried in floor slabs for radiant heating installations which could have been done with steel or wrought iron pipe or replaced with perimeter ducts using no metal at all. Millions of pounds were used for shields or copper flashing where alternate materials would have been practical. Worst of all—beyond one unnoticed plea from Jim Follin's building materials conservation office—neither NPA nor FHA nor NAHB got anything done to realize the greatest metal saving potential at all—the 40% that could be saved on plumbing metals through nationwide adoption of the new national plumbing code.

It was the same story on electrical wiring. A year ago the Round Table called for "research to formulate the most economical use of metals in standardized electrical installations for builders' houses." Anyone could see that for want of such standards some houses use far more copper wire than others to get the same result (the range is from under 2 lbs. per 100 sq. ft. to over 6 lbs.). The electrical industry committee on interior wiring design volunteered for this assignment, but when DPA dropped its 40% home building cutback threat this committee was still no nearer a program than it was last August.

Everyone agreed with the Round Table that 10 lbs. of aluminum could wire a house just as well as 30 lbs. of much more critical copper, but nothing has been done to speed this switch, and one harassed committeeman doubted whether he could "find 150′ of aluminum wire in this whole city" to substitute for copper in the most obvious place to start the substitution—the heavy wire needed for the ground and at the back of the house where the main leads come in.

In all these conservation moves NPA took no part, even when waste racketeers in

Los Angeles, Milwaukee and many other cities fought the home builders' efforts to put over such elementary savings as local code approval of nonmetallic conduit.

The price of ignorance: All this delay on conservation measures which could make further home building cutbacks needless is just part of the price the building industry must pay for the painful fact that nobody of importance in DPA or NPA has any understanding of the building industry or any interest in helping the building industry meet its responsibilities during the rearmament emergency on a constructive and progressive basis.

NPA's Construction Industry Advisory Committee has almost never been asked for its advice. On the contrary, it has been used as window dressing to meet the letter of the law and to give the respectability of "consultation" to NPA decisions its members often unanimously disapproved. The schism between Fleischmann and some of these advisors has almost reached the point of feuding, and the industry's leaders have pointedly asked Defense Mobilizer Wilson not to send Fleischmann in his stead to the February 12 meeting of the U. S. Chamber of Commerce's construction industry advisory council meeting in Washington.

The need is urgent for an intelligent top-level planner in the defense setup to work *with* the building industry instead of *against* it. This has been obvious ever since THE MAGAZINE OF BUILDING Round Table on construction waste made the designation of such a top-level co-ordinator its No. 1 recommendation. Had such a co-ordinator been named a year ago, millions of pounds of critical material could already have been saved and most of the silly mistakes NPA has made and much of the confusion it has created throughout the construction industry could have been avoided.

Seventeen months ago another MAGAZINE OF BUILDING Round Table, in which Charles E. Wilson himself took part, made another recommendation:

> *"When civilian use of materials must be reduced, management should be given full opportunity to use its ingenuity to accomplish more with less, and government—federal, state and local—should co-operate by easing non-essential restrictions, including specifically some of the more wasteful and obsolete code requirements."*

Home building, in proportion to its size, requires only trifling amounts of critical materials—for example, it would take only 5,000 tons of aluminum to wire a million houses. The home building industry is more than ready to co-operate on conservation. In fact, the home building industry, through THE MAGAZINE OF BUILDING Round Tables, pioneered the whole emergency conservation movement and won special commendation for this leadership in Mr. Wilson's report to the President.

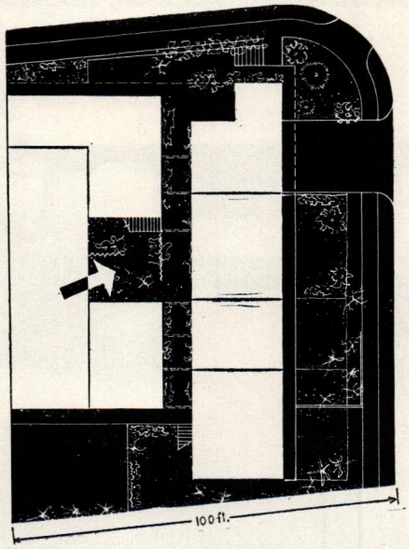
There is every reason home building should reduce its use of copper, but no reason at all why that saving should be enforced by such a clumsy device as cutting the whole industry back 40%.

It is unfair and preposterous for Mr. Fleischmann to go on ignoring the home building industry's suggestions to achieve great savings of critical materials and then arbitrarily threaten to upset the entire industry by cutbacks which would cause great hardship but achieve far less savings.



Julius Shulman

A GARDEN APARTMENT *that stirs the imagination and commands premium rents:*



With rare skill, taste and acumen, Architect Raphael Soriano crammed this 11 unit walk-up (complete with garages) on a Los Angeles lot so small that many other architects might have scorned it for a single family house. Yet he retained in each separate apartment an extroverted, unwalled quality in addition to the confidence of privacy.

How? . . . Primarily by planting sophisticated rug-sized gardens, terraces, galleries and courts in each apartment (photo above). *Also: by the flashing colors, luminescent plastic screens, smart use of site and the simple, strong steel frame which supports and integrates all the gaiety of this warm design.*

RAPHAEL SORIANO, Architect; WILLIAM PORUSH, Consulting Engineer

This original California APARTMENT HOUSE may match the vast influence of the California HOUSE

Los Angeles is a city of famous mellow sun, famous torrential rain, and many other searchlit contradictions which add up to an astonishing impression of vitality. For example, in this booming city there are today hundreds of good conventional apartments whose owners are in a price war to rent them. But when Mrs. Lucile Colby launched this sleek ship into a crowded neighborhood sea, she could ask more than double other rents in the same block—and get them.

She could do this because California is a state of mind. (Reply Angelenos, "New York is a nervous system.") And even in California, apartment dwellers have long been underprivileged; they have witnessed the airy, colorful life which is lived in the famous outdoor-indoor-no-door California houses, without being able to find anything like it in apartments, until now.

That this is an expensive opportunity adds to the exuberance of its success. There are nine one-bedroom apartments and two studios without bedrooms, mostly furnished, in the building. They rent from $175 to $300 without utilities or garden maintenance, while other apartments nearby, containing completely equipped kitchens, dining rooms and usually two bedrooms, range from $65 to $125. The tools Soriano used to build in this big premium:

Realization of site . . . The long California-classic facades of this building face a conventional middle-class neighborhood. But Mrs. Colby and Soriano searched for this lot for three months. Its aloofness is maintained by street separations on three sides and a steep land drop on the fourth, and it has a long view of the serene Sierras.

Rug-size gardens spot precise little patches of green on the ground level while upstairs even the one-room apartments have galleries, laden with potted jungles.

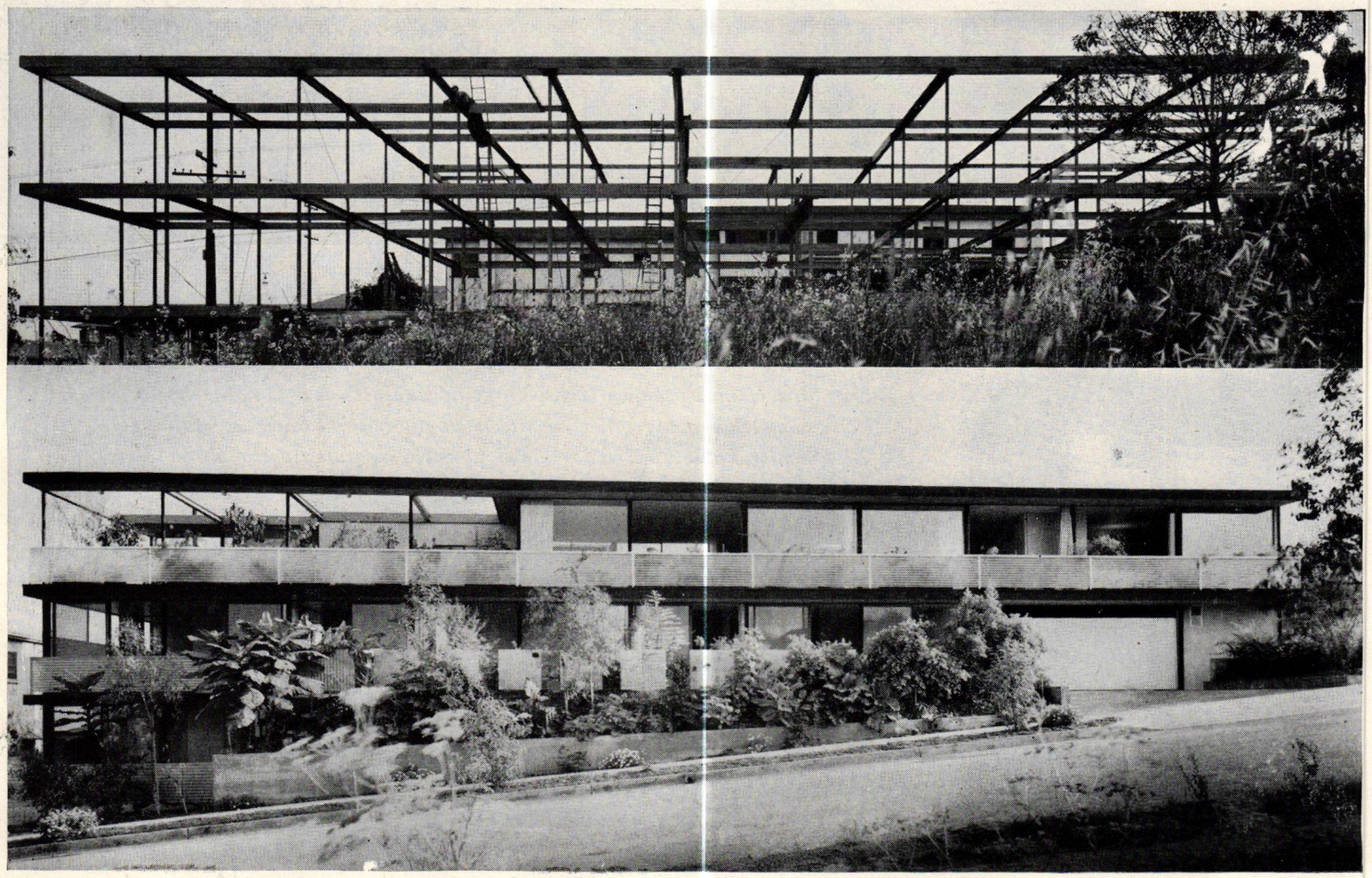
Character . . . Soriano's straight strokes of exposed steel—81,600 lbs. of it—stab into this quiet neighborhood with the excitement of linear architecture. Connecting the lines are planes of vivid

Color . . . Soriano isn't a man to let the 70 different kinds of plants he used here go unchallenged. As often as not their blossoms are pale against the strong palette he used on the structure. And he added

Luminosity . . . On the next page see some of the glowing plastic screens he used (*on page 71, more*).

A ventilated plan (*page 70*) is his method of jamming all these apartments on this small lot, without skinning any of the tenants' elbows. And simple, quickly assembled

Steel framing made the building of all this luxury fast and comparatively reasonable in price.





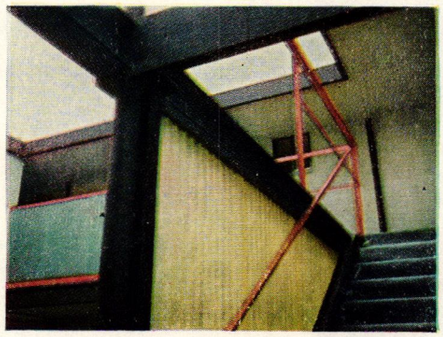
Gardens *as seen from a sidewalk*

EXPLOITING A NEW MATERIAL

Says Soriano, "Luminosity is the important thing in achieving a greater sense of space within enclosures." He is able to prove his point in the many boxed-off sections of this structure. Where he might have built fences of wood or metal, he instead used sinewy plastic shields made from a solid interwoven mat of glass fibers 3/16″ thick, impregnated with polyester resin and a catalyst under enough heat and pressure to solidify it into corrugated sheets 1/16″ thick (*Nov. issue '51, p. 260*). Sometimes he framed this up. Sometimes he hung it from wires, where it can sway gently in the breeze —a least intimidating enclosure and a most wonderful screen.

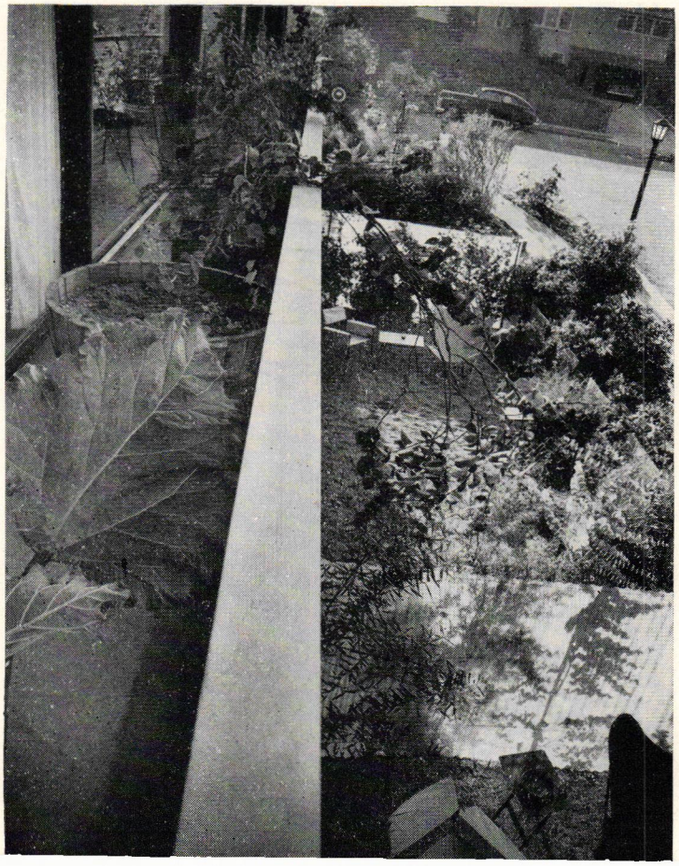
Not only does light reflect from the surface of this bright material, but there is an added lift from the light which diffuses through. It can be nailed, sawn or hung from wires, and very *fast:* Soriano figures that one man can place 300 sq. ft. in 8 hours at a total cost, including the plastic, rough lumber and labor, of $1.35 per sq. ft.

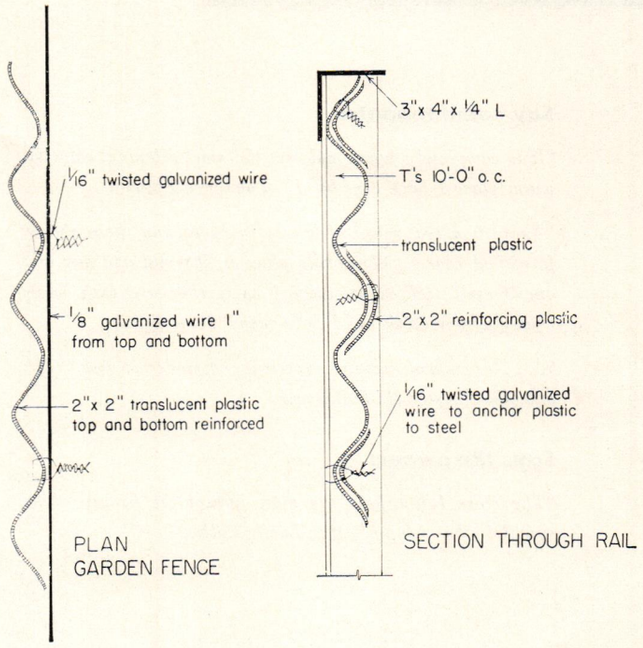
Photo: Shulman, courtesy Alsynite Company of America



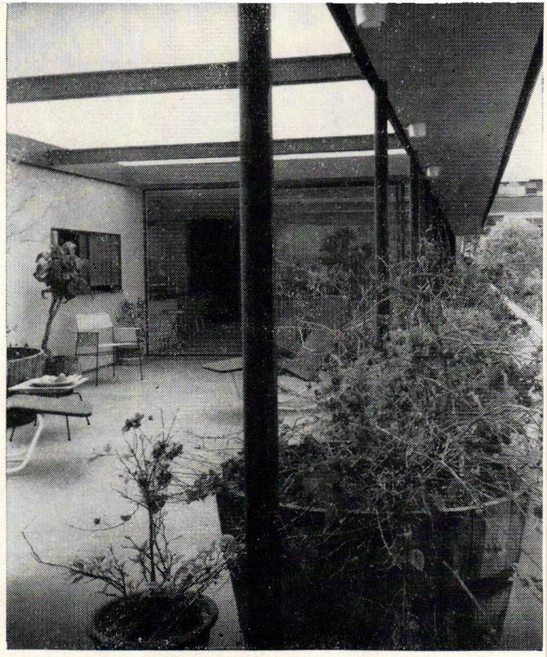
How to enclose a stairway with a glow

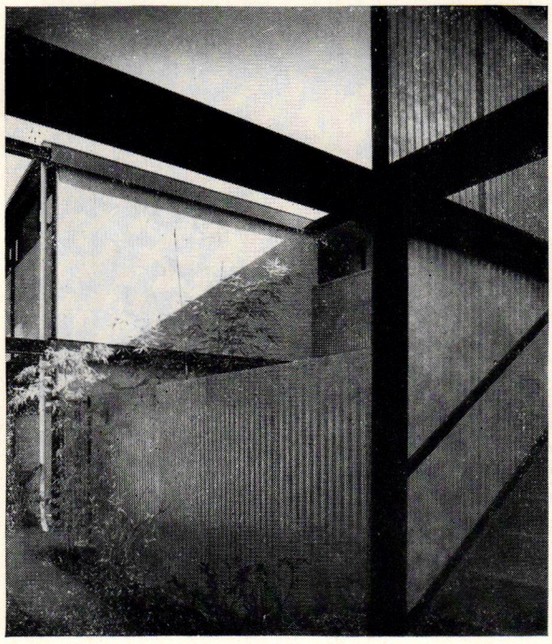
. . . and from a gallery above





Because plastic material does not have to be drilled, detailing is simple.



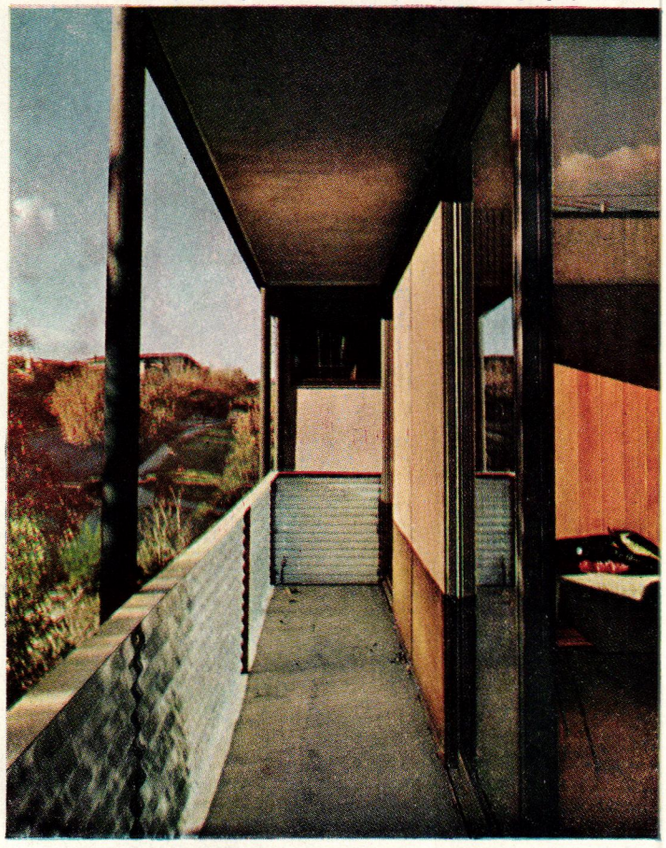


Behind the blank, almost secretive brilliance of the plastic-girded exterior of the apartment house is the other side of its coin, an informal, relaxed environment. If the exterior, *left*, says: "Private lives—don't look in!" the galleries *above* and *below* and the interiors, *opposite page*, say clearly: "Relax." Which is what the tenants do after paying their steep rent (*see quotes below left*), proving that architecture can be a tonic even in mellow California.

Cost of major building elements

Excavation, Grading & Concrete	$12,025.00	Steel Windows & Doors	6,073.00
Steel Frame	11,509.00	Regular and Special Glass	6,717.00
Rough Lumber	8,185.00	Hardware	3,175.00
Carpentry Labor	16,498.00	Painting	8,054.00
Plumbing	9,677.00	Flooring	2,234.00
Electrical Wiring	6,265.00	Folding Partitions	2,146.00
Electrical Fixtures	801.00	Plastic Screens	2,325.00
Aluminum Kitchen Cabinets	3,435.00	Labor for Plastic Screens	700.00
Roofing & Plastering Decks	6,000.00	Asphalt Paving	487.00
Plaster	7,800.00	Landscaping	3,000.00
Insulation	750.00		

Photographs by Shulman, courtesy Alsynite Company of America



Say some tenants:

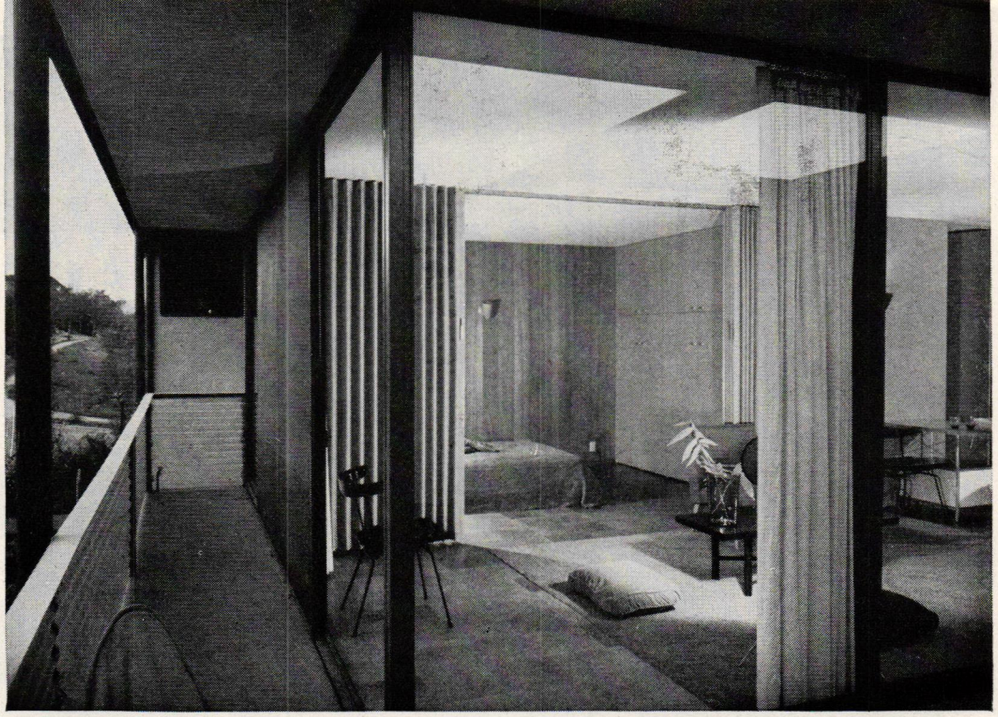
"It is completely functional, yet the most relaxing, colorful, warm place I have ever lived." Lawrence Turman.

"There is a real sense of luxury in occupying these simply furnished rooms. The whole place is cheerful and gay and one doesn't feel as disciplined as is the case with many contemporary dwellings I have seen." John Nesbitt.

". . . . a new and exciting experience in modern living." Mr. and Mrs. Lester H. Ballantyne.

Says the owner:

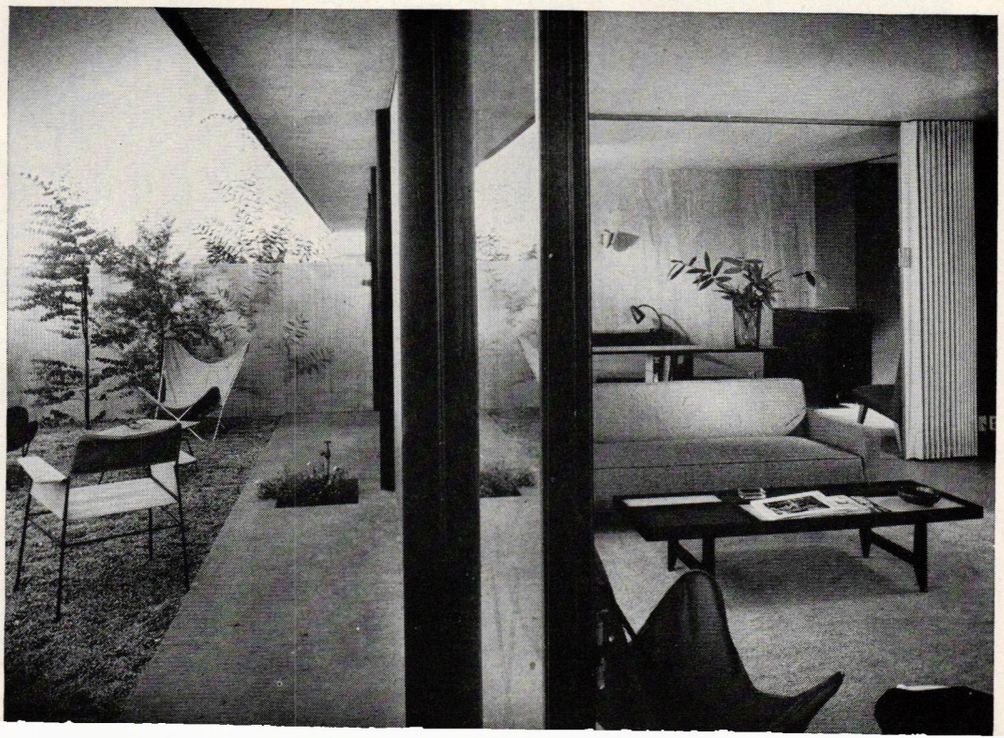
"The more I live here the more appeal the beauty of its simplicity has for me." Mrs. Lucile Colby.



View from deck into living room and bedroom of second story apartment shows how these two rooms can be separated with folding partition. And the outdoors is always accessible. Floor is cork; paneling in bedroom is mahogany.



This is the noncommittal entrance to the downstairs lobby of the owner's penthouse, opening from the main entrance to the court. Panel on the right is wired glass (in blue) with a steelier sheen than the plastic.



Glass sliding doors, ceiling height (8') open this ground floor apartment to its matching garden. At the end of the garden is the usual plastic fence. Hose faucet has its own garden cut in the concrete slab, a final Soriano touch.



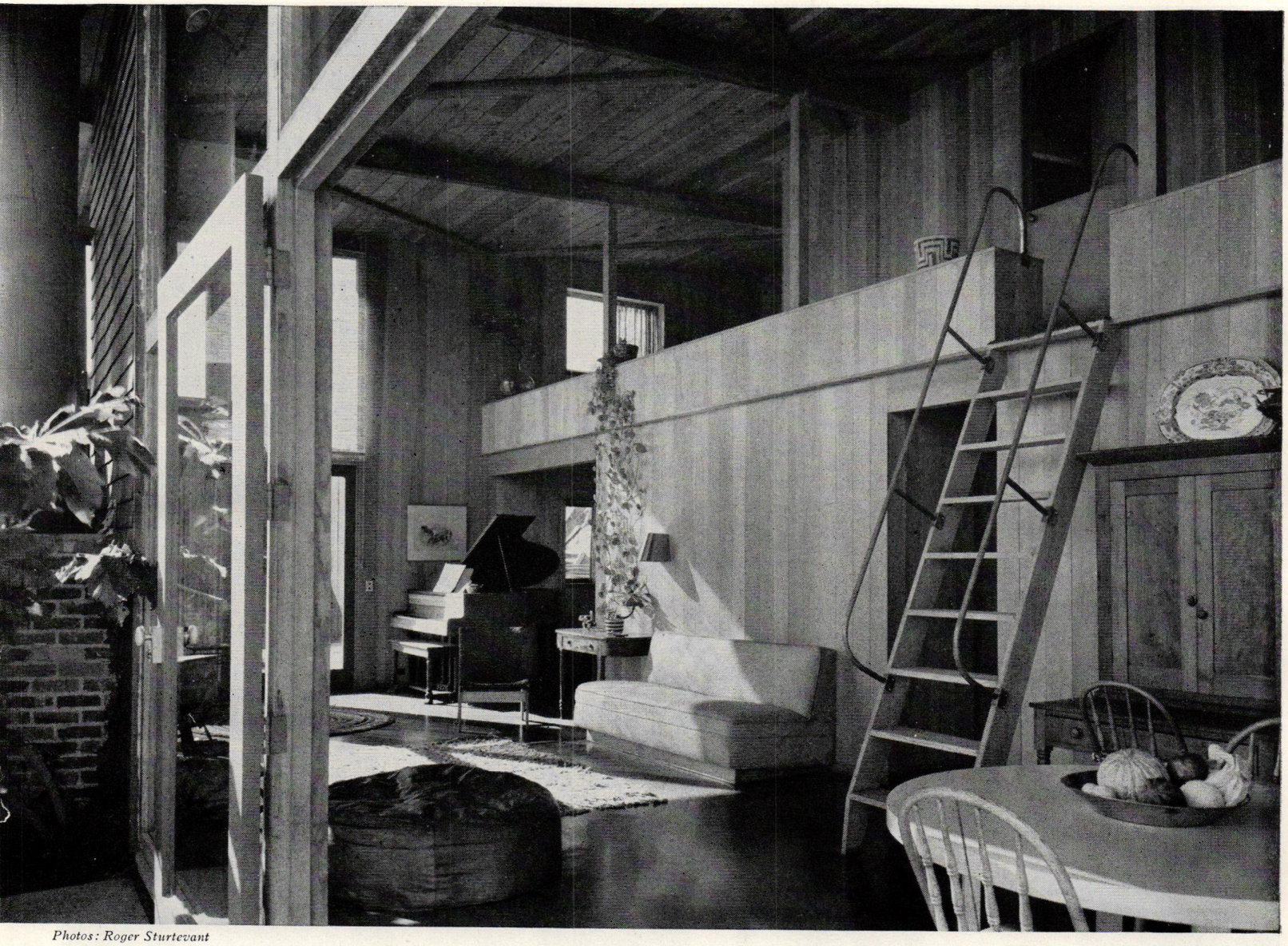
Dining area of Don Emmons' own balcony house (left) enjoys full Bay view. Interior (right) looks bigger than it really is.

MEZZANINE HOUSES

embrace San Francisco's sun and view with two-story walls of glass, open up dramatic interior space on low budgets



Full-height plate glass wall with simplest possible framing provides light, view and ventilation for the entire interior.



Photos: Roger Sturtevant

Latest house idea given by California to the country as a whole is the economical inside balcony or mezzanine.

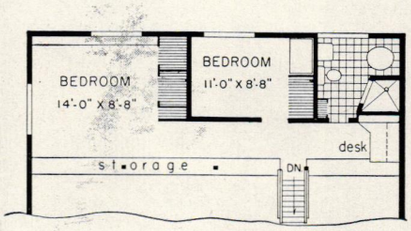
In the contours of Marin County, just north of San Francisco, nothing is small or prosaic. There are big, rounded hills, vast water panoramas, hard-sweeping winds and occasional tidal waves of billowing fog. It is small wonder that a feeling of rugged simplicity and independence works itself into the professional attitude of top Bay Area architects, who don't always care a great deal about sophisticated, self-conscious expression in their forms and shapes.

The big view feeling, especially, was on the mind of two such architects, Donn Emmons (pp. 74-78) and Mario Corbett (pp. 79-81) when they devised the "mezzanine" houses shown on these pages. They were thinking too of compactness, for ground is at a premium on Marin County's remaining building sites, most of which have to be shelved into steep hillsides.

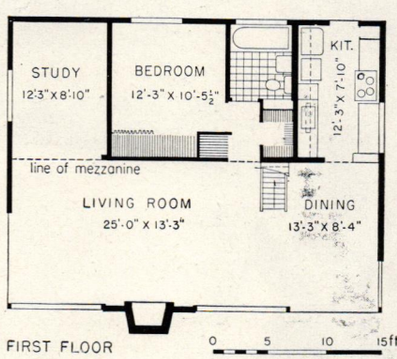
Consequently, each started with a two-story glass wall facing the big Bay view, and with a tight plan that used land sparingly. The results in all four of their houses point up the arguments for a mezzanine type of scheme. From the standpoint of livability, the advantages are:

- A living area two stories high that makes the tightly planned small house seem almost romantically spacious. And a change of ceiling level that divides this area into a tall, stately front (toward the view) and a more intimate low-ceilinged rear.
- More light for all rooms thanks to a full wall of glass; no dark halls.
- The same huge view from every room in the house (except the bathrooms).

LOCATION: Mill Valley, Calif.
WURSTER, BERNARDI & EMMONS, Architects
A. V. SAPH JR., Structural Engineer
LAWRENCE HALPRIN (middle house),
ECKBO, ROYSTON & WILLIAMS (north house),
Landscape Architects

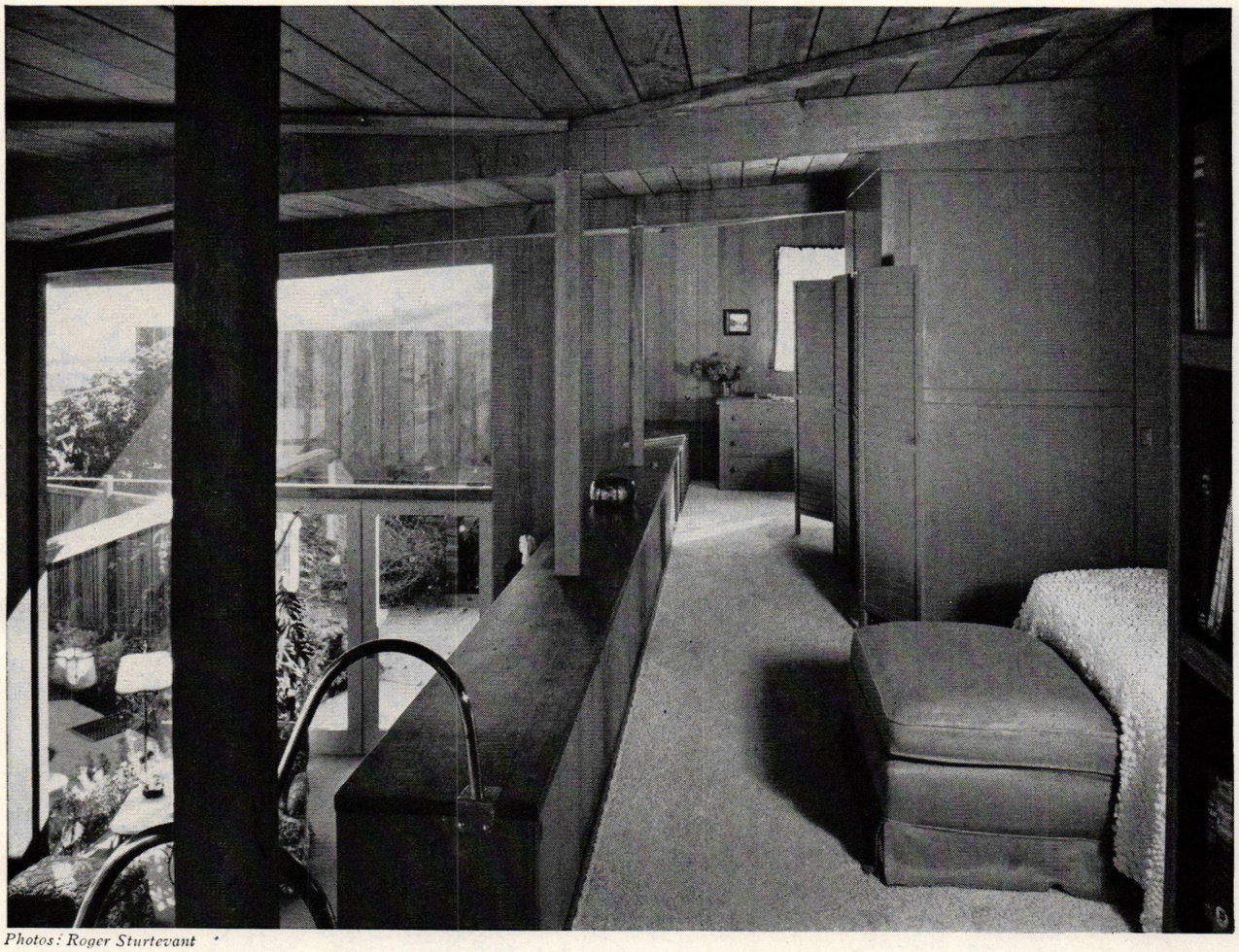


MEZZANINE



FIRST FLOOR





Photos: Roger Sturtevant

Balcony rail of north house was made low (20") so that view could be enjoyed from bed, wide (18") for safety and for storage cabinets.

This includes the second floor bedrooms, which can be left open to the living room (since they are far enough above the living room to retain privacy) and reduced in size without giving the feeling of smallness (since they share the two-story interior space). In each house subordinate areas—other bedrooms, baths, kitchens—were relegated to the rear of the plan to give the living area full advantage of the view and morning sun.

From the standpoint of cost, the argument becomes even louder. The three Emmons houses, identical except for landscaping, color and a few interior details, came to a low $10,000 each when completed in 1948 (excluding gardens, some fixtures and finishing done later by the owners). For 1,246 sq. ft. of house this was just over $8 a sq. ft. And roughly one-third (437) of these sq. ft., in the main living area, is *two* stories high, doing double duty at a bargain to the owner. Architect Emmons feels his "triplets" cost 10-15% less than conventional houses of the same floor area, and considerably below comparable jobs he was doing at the time. Reason: the simple structure and inexpensive mezzanine space. The model has been repeated several times since, most recently for $15,500 in 1951, or $12.50 per sq. ft. with all details. It has been so popular Emmons is likely to do a dozen more.

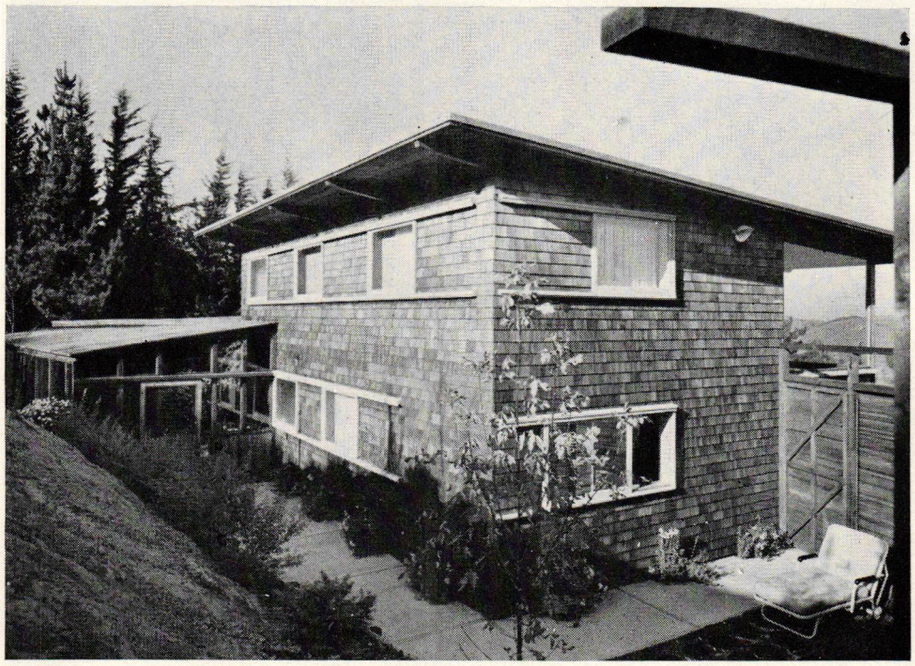
Here are Emmons' major construction economies: The whole *plate* glass window wall actually cost no more than the house's conventional rear wall, a solid frame-and-sheathing surface with five windows and a door punched into it. By using stock 4 x 4s and 4 x 6s of prime grades with stops instead of the usual millwork for the big fixed panes of ¼" plate, the architect saved an estimated $300-$400. The full ventilating job for the glass side of the house is done by the entrance doors alone, eliminating costly movable sash—an inexpensive, handsome and adequate solution. No elaborate frames were needed for the smaller back windows, which slide in continuous wood strips nailed to the exterior wall.

The plumbing stack is economically planned: bath and kitchen are back to back with the second bath directly above. No heating is required on the balcony floor; copper pipe imbedded in the slab for hot water radiant heat creates enough convection to keep both floors at uniform temperatures. No curtains are necessary: east sun is welcome every day of the year; solar replaces artificial heat on all sunny winter days.

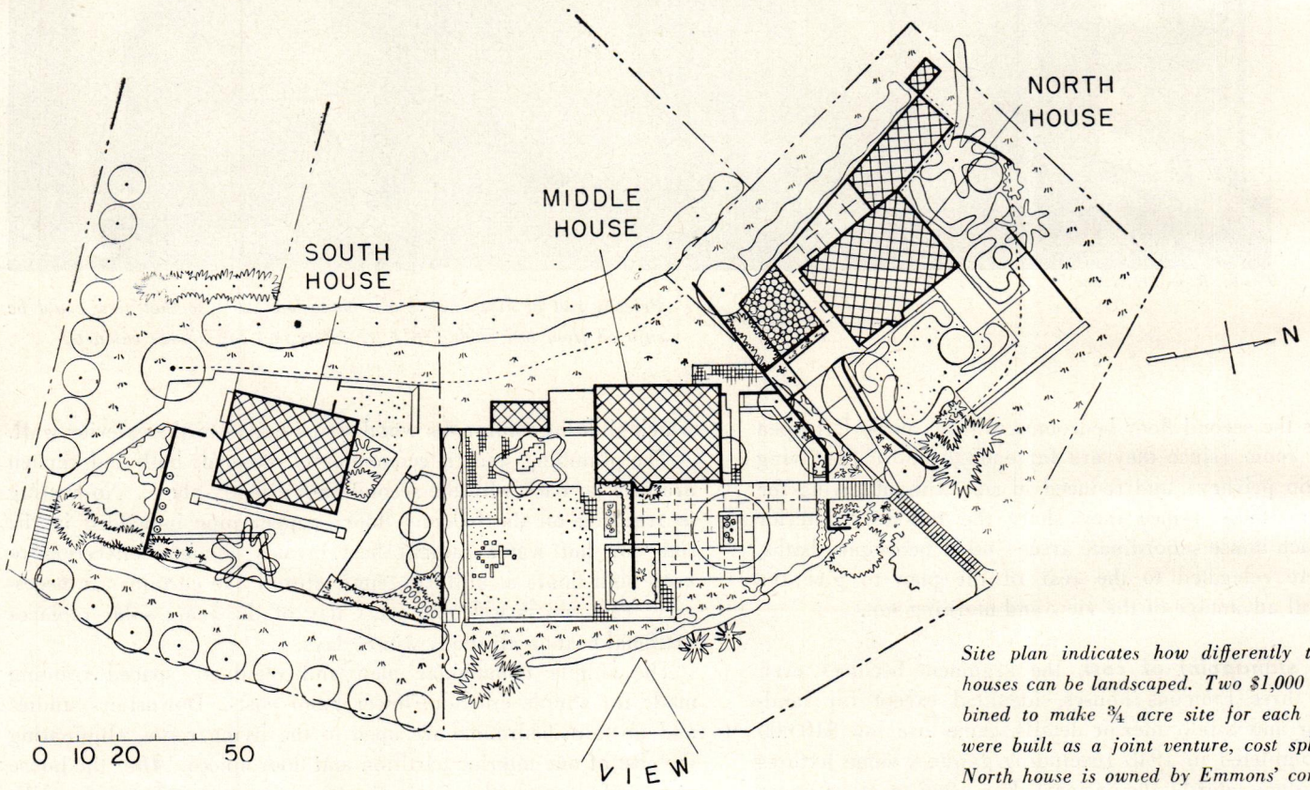
The simple rectangular plan and regularly spaced framing made for simple erection, lower labor costs. Downstairs studies and upstairs bedrooms are open to the living room, eliminating the cost of one interior partition and door apiece. *After* the house was roofed over, the mezzanine was suspended from the full-height wall studs under cover, at a saving. Foundation and slab were poured in one piece, finished only with integral color.

Further planning eliminated nonessentials, helped pare costs to the bone. There is no entrance hall (gate of Emmons house serves as "front door," garden as "hall"). And there is no stair hall inside; a ship's ladder saved both space and structural costs. All three young owners find it requires, if anything, less energy to navigate than a stair. On the outside, the shoulder-high outdoor chimney was bricked only part way up, with common sand-mold brick, and topped with an economical patent flue that required little flashing. The siding of redwood shingles was the least expensive kind available and requires no painting.

With a large glass wall facing insistent Bay winds, a stout structural system had to be invented. The shed roof (4 x 8 beams covered by 2 x 8 T&G and topped with tar and gravel) is braced with 2 x 6 diagonals flat-spiked to the under side. This rigid roof diaphragm transmits wind loads from the unbraced glass wall back to the more solid bedroom wall, which is further strengthened by diagonal sheathing to take the strain.

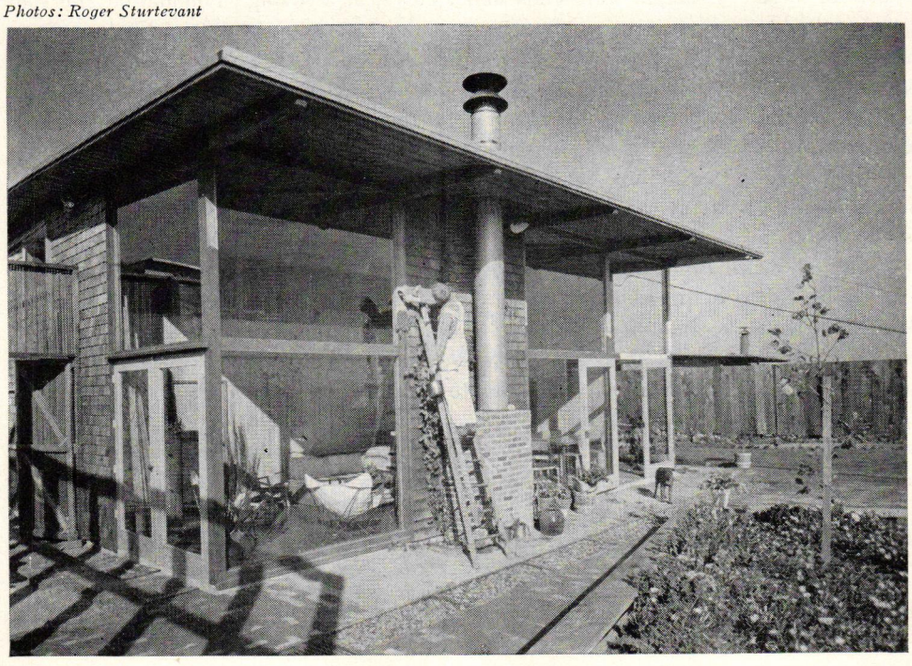


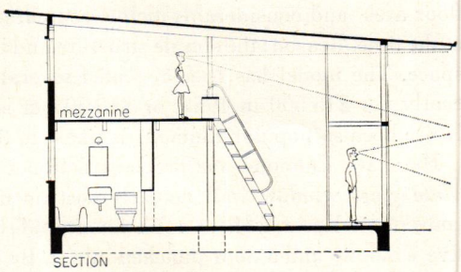
Street side of the north house has all the simplicity and unself-consciousness of a fisherman's shack. Windows slide in economical sash of wood strips nailed to wall. Small greenhouse has been added at the corner, left.



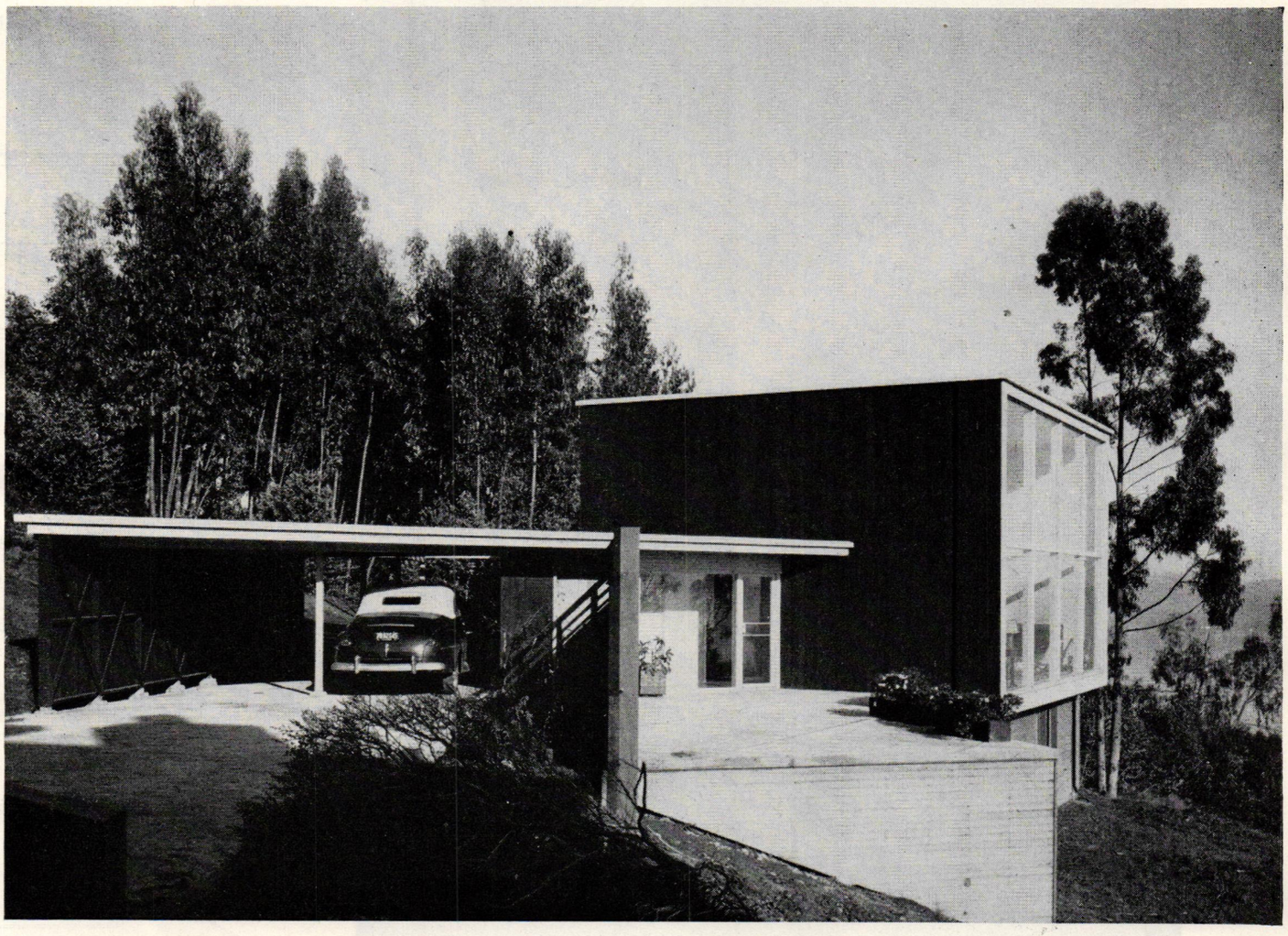
Site plan indicates how differently three identical houses can be landscaped. Two $1,000 lots were combined to make ¾ acre site for each house. Houses were built as a joint venture, cost split three ways. North house is owned by Emmons' contractor.

Photos: Roger Sturtevant



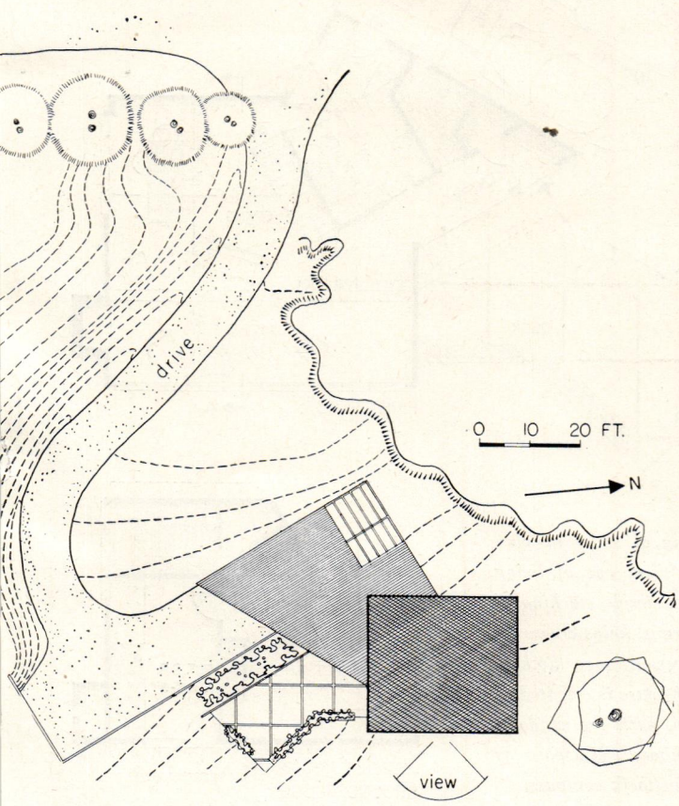


South house was built for an architect friend, wife and two young children. Two cost-cutting items: Patent flue bricked only shoulder high; inexpensive siding of redwood shingles. Main entrance is at left.



ANOTHER MEZZANINE HOUSE

—a study of form in black, white and gray

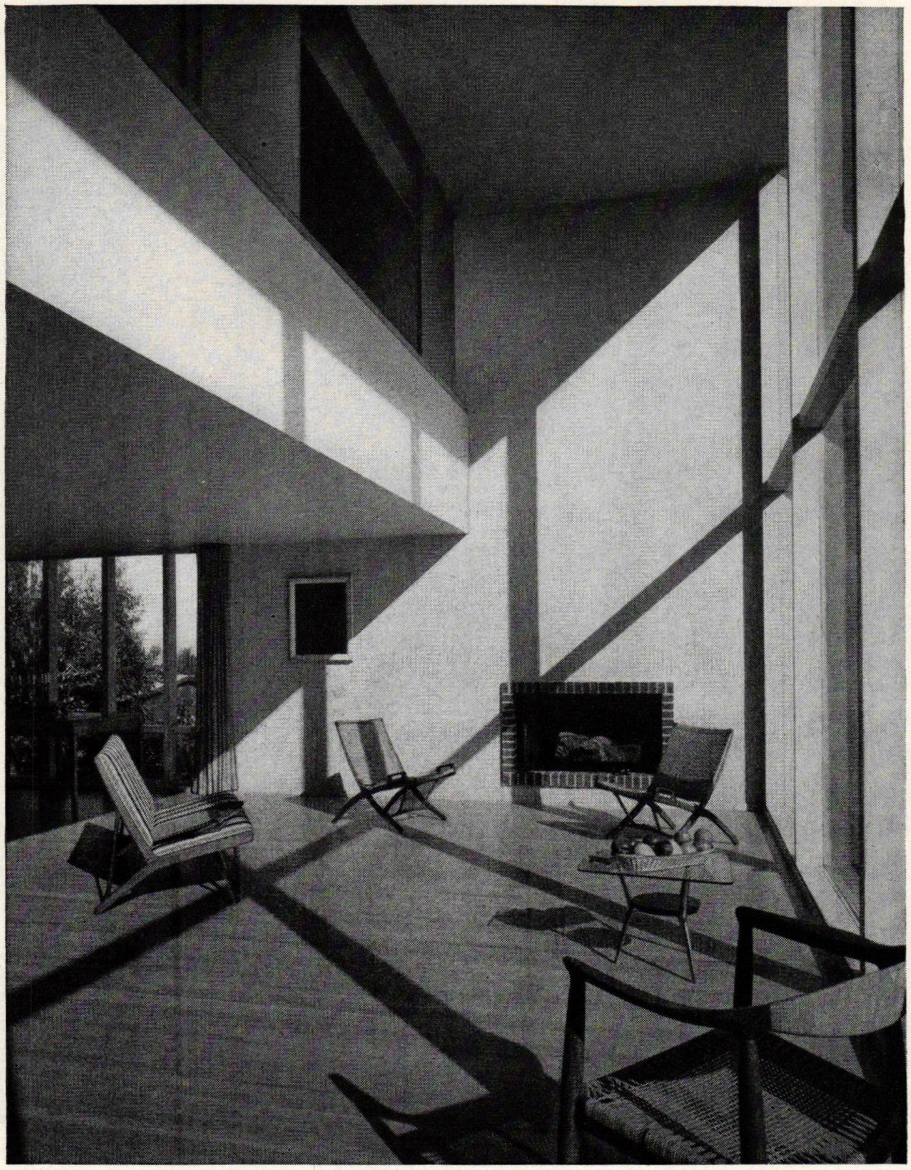


LOCATION: Sausalito, Calif.
MARIO CORBETT, Architect
HYMAN ROSENTHAL, Structural Engineer
MALKIN & SHERLOCK, Landscape Architects
CARDINAL CONSTRUCTION CO., Contractors

Larger, further embellished and more formal than the Emmons triplets is this mezzanine house for a doctor and his wife in nearby Sausalito. The ingredients, though, were basically the same: a hillside site with virtually the same panoramic sweep of the Bay to the east and south.

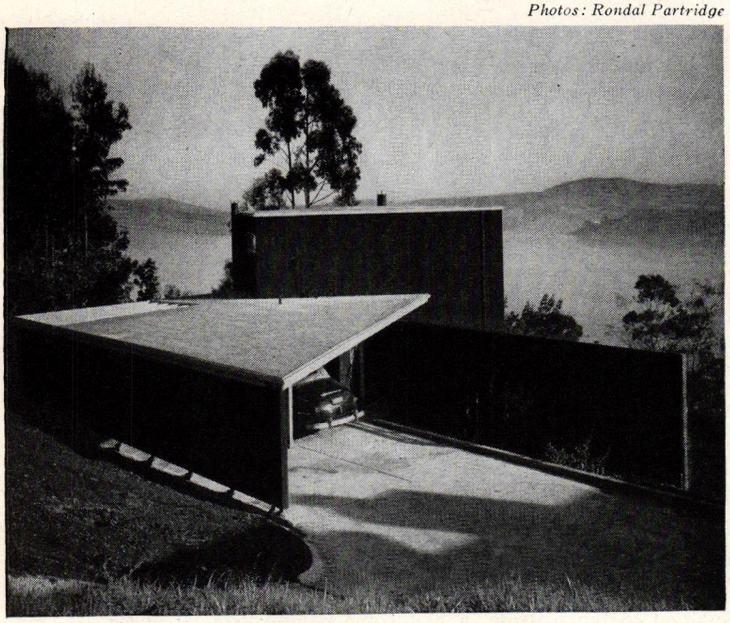
Here again the inside balcony plan yields sun, view and freedom of interior space which can be shared by living room and upstairs bedrooms alike, some of the construction economies and a good example of the change of ceiling level. One enters under a low overhead that gives a sensation of shelter, then steps into the full height of the room where eye and muscle reflexes get an immediate feeling of expansion and brilliance. If the view and tall space become completely overpowering, it is possible to retreat back under, to the dining-sitting area in the rear.

The over-all effect of the house, seen from a distance, is almost sculptural: a large abstract molded to the hillside, a handsome composition of three geometric shapes—cube, trapezoid and vertical plane. The purity of basic forms is emphasized by a crisp, severe color scheme: black, white and gray inside and out. Corbett conceived of the cube as "the simplest form of shelter,"

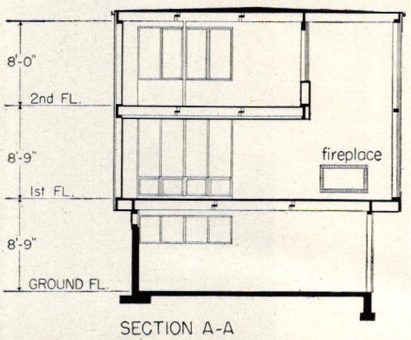


Sunlight cut into a giant grid pattern pours into the two-story living room. Mezzanine, held up on steel beam, has bedrooms with full sliding panels that open up to share living room's view. (The arrangement is similar to that of the Charles Eames house shown in the Sept. issue '50.)

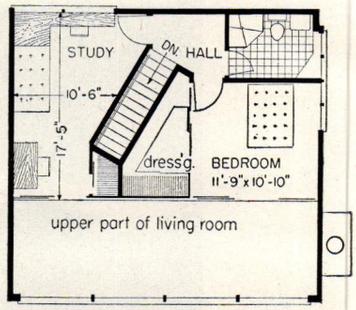
Photos: Rondal Partridge



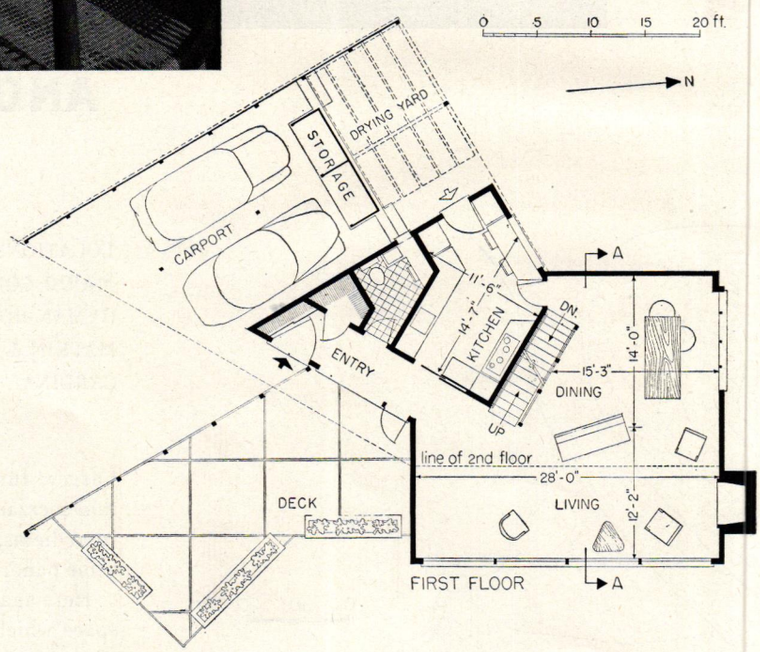
Driveway from street, left, descends to angular carport which has storage cabinets for equipment, partly louvered roof for laundry drying yard at rear.



SECTION A-A

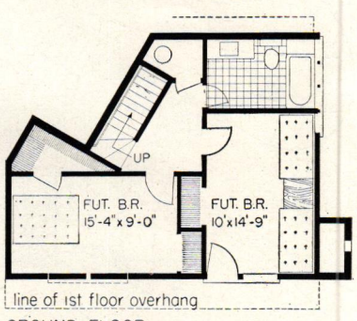


SECOND FLOOR



FIRST FLOOR

Clever angling of stairs in plan above keeps them out of living room, permits simple stacking of two straight runs, helps create an ingenious three-entrance kitchen. Main cube of house is oriented to get full view, with no windows facing neighbors. Carport is twisted around to fit contours.



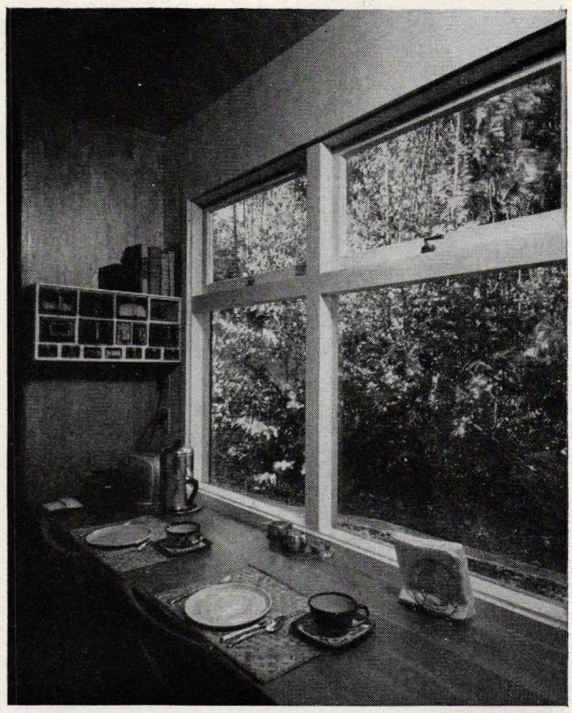
GROUND FLOOR

provided in it space for all living facilities, then intersected it with two planes, one forming the carport-storage-drying area, the other a wind-privacy fence for the terrace.

As in the other mezzanine houses, the architect opened up one whole wall of the cube as an outsize glass showcase to display the San Francisco area. The city, the Bay islands, Oakland and Berkeley all merge into a giant panoramic mural of changing mood and color on an 18′ x 27′ viewing screen. (Television may never bless this home; the owners are practically sitting inside a big table-model TV set looking out.) Sunlight streaming in through the big panes throws a bold shifting pattern of shadows on floor and walls, and at night the faraway city lights become a part of the room.

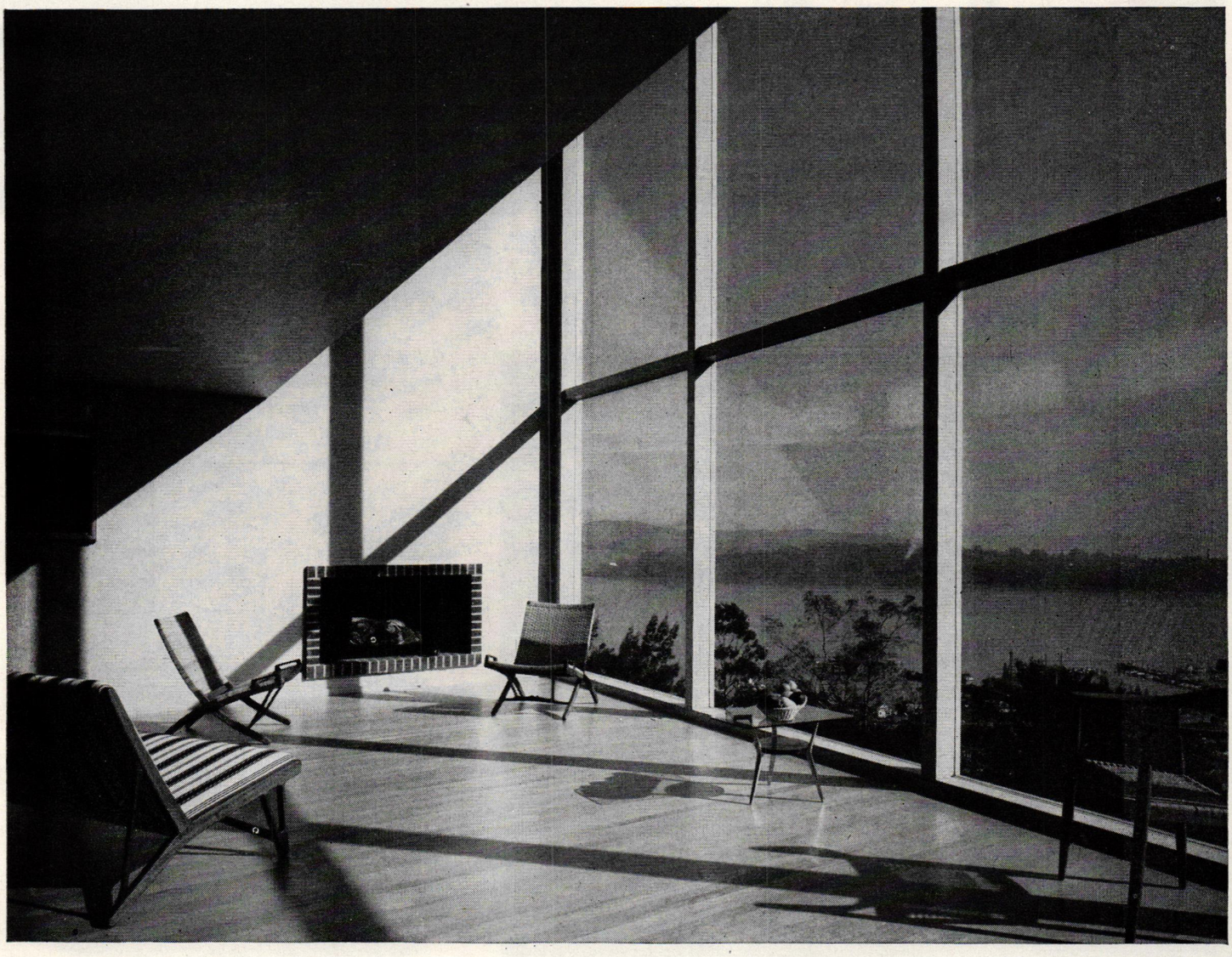
There were some disadvantages, too: Corbett needed a steel beam (16 WF 58) to support his "floating" balcony floor, and the owners felt themselves confronted with an expensive curtain problem for the big window. (And would have faced a heating dilemma as well had the house been built in a colder climate.)

With a total floor area of 2,082 sq. ft. (some 970 on the main floor, 520 on the mezzanine and 590 on the lower floor to be finished later for children), plus a carport of 600 sq. ft., the contract price came to $21,632 (excluding the architect's fee), or just over $9 per sq. ft., figuring the open carport at half its area.



Kitchen boasts large windows to north, a built-in breakfast bar for quick meals and occasional snacks.

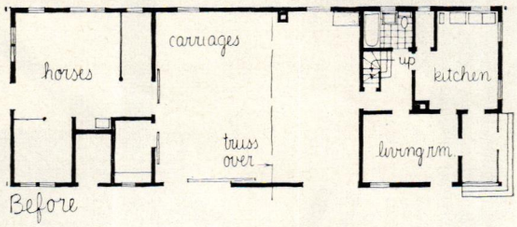
Light gray walls, bone-white ceilings, below, carry outside trim colors inside. Chaste raised fireplace and a few pieces of Danish furniture maintain effect of simplicity.



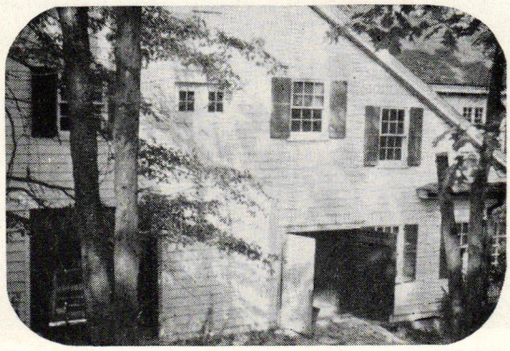
Handsome 31'6" glass wall has rhythmic design and admits sun almost clear across living room. Fireplace on opposite wall (facing page) makes secluded winter corner.



Old barn, below, had ample accommodations for horses, hay, carriages, abandoned junk; also, at right, quarters for caretaker. Left, exterior view of glass wall.



Before





GENUINE OLD + GENUINE NEW, a good remodeling combines rather than compromises, has room for both old-fashioned human fallibility and clean modern design

LOCATION: Greenwich, Conn.
GIORGIO CAVAGLIERI, Architect
VIGAR CONSTRUCTION CORP., General Contractor

This is not a typical remodeled barn. It is not rustic. It has no exposed beams. It has no pretentions to quaintness, no shutter romance, no foolishly preserved relics such as stall partitions.

Instead it is a handsomely genuine house—genuinely old, and genuinely new. It shows what can happen in a good remodeling job and cannot happen in a compromise where the architect reaches to add old "charm" to a wholly new structure:

1. It has "depth in time," and with this a *natural* element of surprise. Because you cannot understand it all at once, you have to unravel each part of the story separately, each why and wherefore of the present house.

2. It is casual, less "architectural" than most new modern houses, and this, too, came about naturally. In any remodeling excessive formality is out of place, so the architect is released from the obligation to produce pure and perfect design. He is expected to "make-do." An example, the off-balance window at the right above the glass wall *(exterior view, far left opposite)*. To have forced it into the composition even simply by aligning its lower sill with those of the other windows would have required special sash and resulted in a dinky window casting inadequate light on the stair landing.

Among the good things which were kept are the pleasing mass and volume—46,000 cu. ft. including the third floor—and the expansively high and irregular boarded ceilings. (To begin with, it had been a carriage house solidly built in the 1890's. As such, it had a certain lumbering dignity.) The exterior shell was in good condition, required only a new coat of paint; inside, the walls had to be insulated, plastered and painted, and ceilings patched in places.

The new floor plan is perfectly suited to artist-owner Leo Lionni, his family and the way they live. The new 31′6″ glass wall in the living room faces directly south; opposite this a simple geometric fireplace makes the focal point of a secluded winter corner; Mr. Lionni's high-ceilinged studio has its big window facing north. Entrance hall, living-dining room and studio join together some 1,440 sq. ft.—right for entertaining and for the way its owner works: no ivory towerist, he *likes* to be within sight and sound of family activities. Upstairs, master bedroom and bath are neatly private, with guest and boys' rooms on a three-steps-higher level.

Refinement of design is especially notable in the glass wall. Here architect Cavaglieri used stock doors as modules, and had the glass sections cut the same width, so that when a door is open its edge falls directly over a mullion. This yields an uninterrupted rhythm of vertical lines. Also, the doors add warmth to that wall, are a nice reversal of the usual order of things (the *wall* is glass, the *openings* or doors solid slabs of wood). Incidentally they contribute something in the field of human relations: the family is screened from the view of waiting visitors. Another interior refinement is the nice contrast between birch plywood and white painted walls ("I've already lived through every known variety of colored walls, 20 years ago in Italy," says Mr. Lionni). The plywood, used for several walls and all doors, was left rough for texture interest and liberally stained with ochre and black for a soft grayed effect.

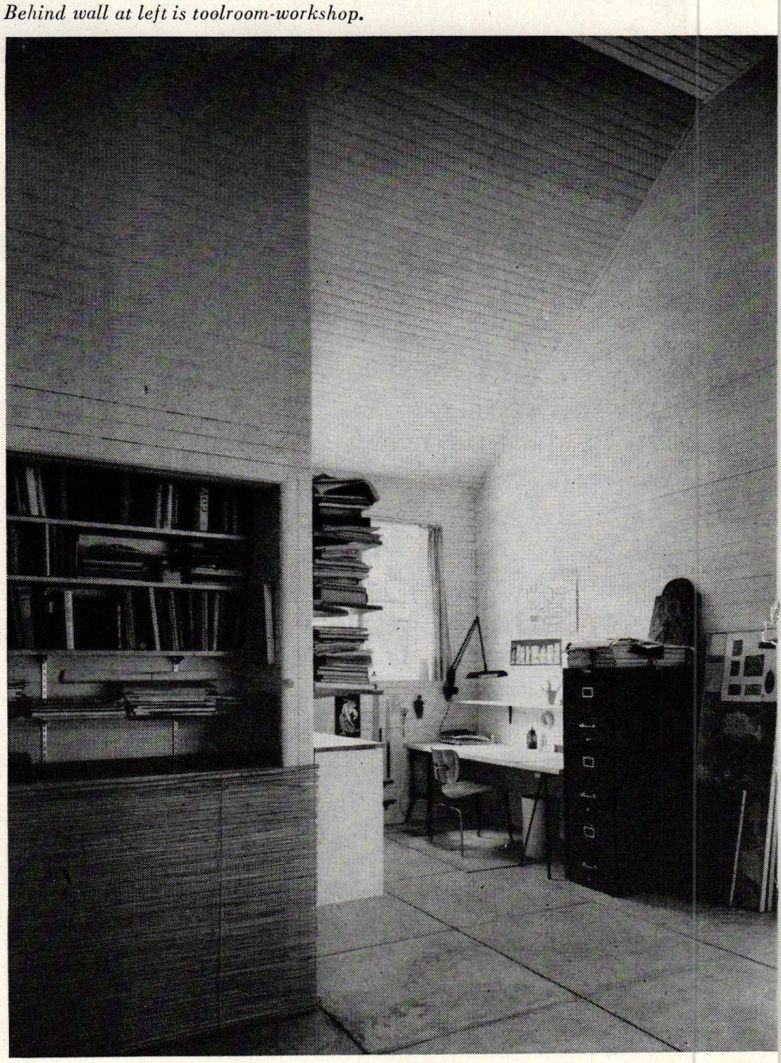
Structurally, the major change was the removal of an enormous and ungainly truss which cut up the whole second floor and allowed less than 6′ head room. This was replaced by a new steel beam which catches the old floor joists and which is supported by two new lally columns, one immediately inside the glass wall and one in the chimney corner (*see floor plan, opposite*).

The section where hall, kitchen, dining area and, on the second floor, master bedroom now are was originally quarters for the caretaker. Here the porch has been enclosed, converted into a pantry-laundry adjoining a newly equipped modern kitchen. The wall between two small bedrooms was removed to make a 20′-long master bedroom. New oak stairs replace rickety old ones, and new posts and a parapet wall replace the old bearing partition (*bottom photograph, opposite*). This opens up the landing hall, makes it



Studio, left, where the artist-owner paints and composes mosaics, has a high ceiling and big window facing north; is open to the sight and sound of living room activities.

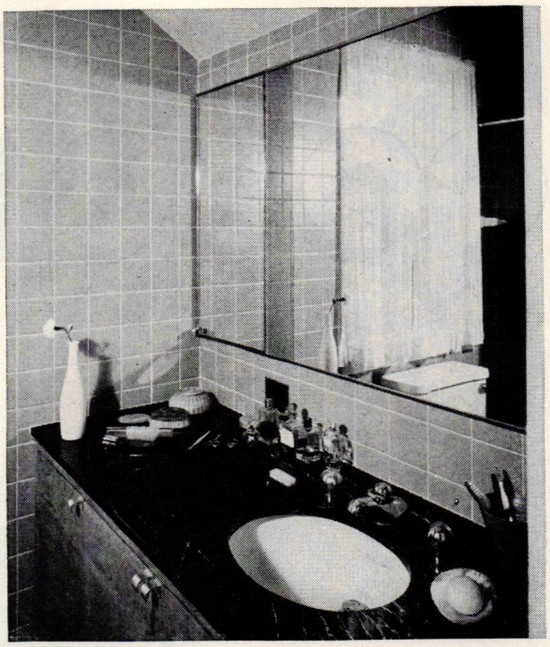
The L-corner of studio, below, serves as a home office, complete with filing cabinet. Behind wall at left is toolroom-workshop.



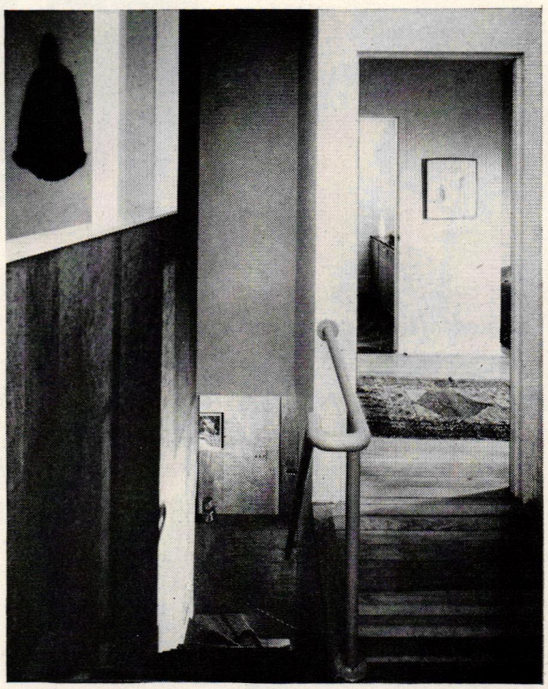
in effect a gallery, and gives the boys a lookout station from the level of their rooms.

The center and other third of the house had been horse stalls, hayloft, carriage room and general junk storage space. In addition to installing partitions to make three new bedrooms on the second floor, considerable work was done on foundations and floors. The fieldstone masonry around the perimeter of the house was repaired. The present living room floor had been part concrete, part wood, with crawl space beneath; on the bottom of the crawl space there is now a 3″ topping of concrete. Where the studio is had been dirt stalls; floor here is now a 4″ concrete slab on a 3″ vermiculite insulation layer over gravel. Living-dining room, hall and bedroom floors are oak; kitchen, asphalt tile; bathrooms, tile or linoleum. There is a new gas heating unit installed in the old basement beneath the former caretaker's quarters.

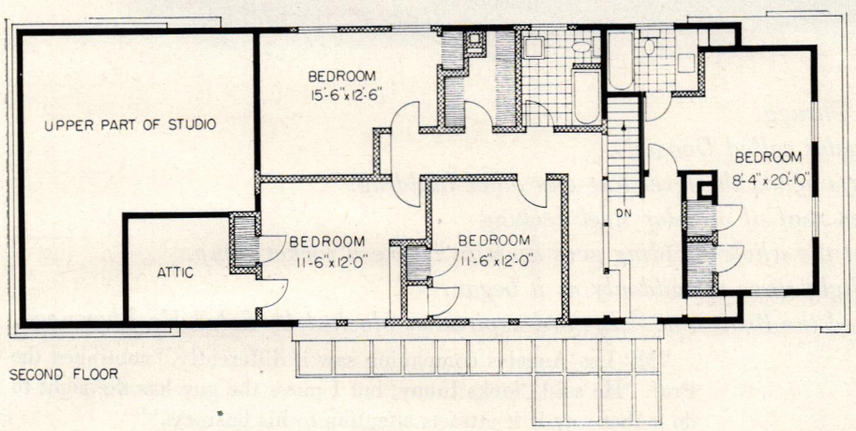
The owners consider all this remodeling well worth the $9.30 per sq. ft. it cost. Says Mr. Lionni: "Not only have we done things to the old barn. The barn has done things to *me*. If I were to build myself a new house now, it would not be *conventional* modern, would be more free and easy. . . . But we don't want a new house; we like just what we have. The high ceilings, the make-do, the sense of 'depth in time,' the excuse to get away from perfect design —these are the things which give a human quality, and none of them can go honestly with building new."

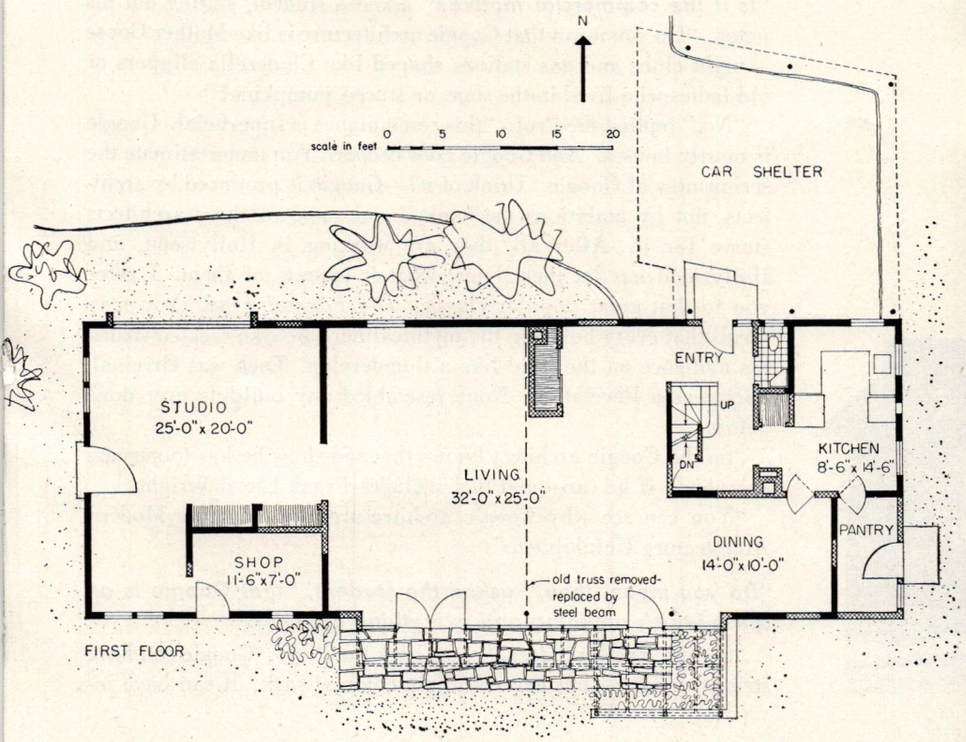


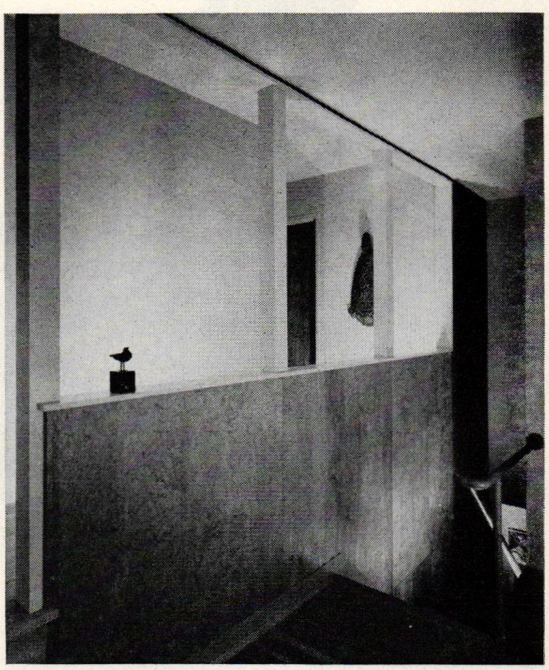
Master bathroom has washbowl set in black marble counter top; beneath it are plywood built-in drawers and shelves.



Gallery-effect stair landing was made by removing old bearing partition and replacing it with posts and parapet wall.





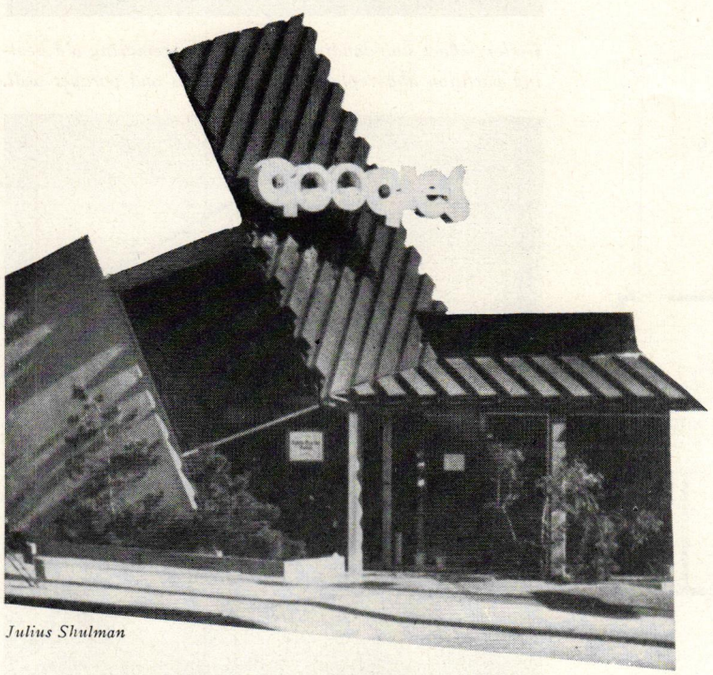


googie

ARCHITECTURE



"We call it Googie architecture," said Professor Thrugg,
"named after a remarkable restaurant in Los Angeles called Googie's.
That's one you should see. (Photo, above) It starts off on the level like any other building.
But suddenly it breaks for the sky. The bright red roof of cellular steel decking
suddenly tilts upward as if swung on a hinge, and the whole building goes up with it like a rocket ramp.
But there is another building next door. So the flight stops as suddenly as it began.
"It seems to symbolize life today," sighed the Professor, "skyward aspiration blocked by Schwab's Pharmacy.



Julius Shulman

"My Los Angeles companion saw it differently," continued the Prof. "He said, 'looks funny, but I guess the guy has the right to do it that way if it attracts attention to his business.' "

"Is it the commercial motive?" asked a student, getting out his notes. "Do you mean that Googie architecture is like Mother Goose —night clubs and gas stations shaped like Cinderella slippers or old-ladies-who-lived-in-the-shoe or stucco pumpkins?"

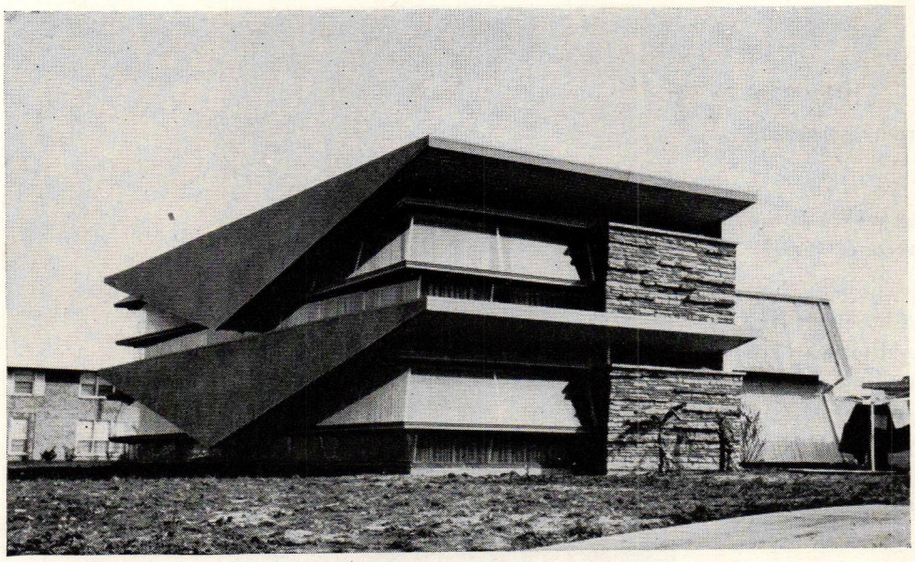
"No," replied the Prof., "this resemblance is superficial. Googie is mostly houses. And Googie goes deeper. You underestimate the seriousness of Googie. Think of it!—Googie is produced by architects, not by ambitious mechanics, and some of these architects starve for it. After all, they are working in Hollywood, and Hollywood has let them know what it expects of them. I refer you to that great popular classic, *The Fountainhead*. You may recall that every building the mythical hero Roarke created struck his audience on the head like a thunderclap. Each was Original. Each was a Revelation. None resembled any building ever done before.

"So the Googie architect knows that somehow he has to surpass *everybody* if he can—and that includes Frank Lloyd Wright.

"You can see why Googie architecture then becomes Modern Architecture Uninhibited."

"Do you mean, then," asked the student, "that Googie is an art in which anything and everything goes?"

"So long as it's modern," came back the Prof. "Googie can have string windows—but never 16-light colonial sash. It can have in-



Life: Lou Carrano

verted triangle roofs but never a cornice. It may be decked out in what my Googie friends call 'vertical or horizontal lovers' but never in green shutters. The first rule of Googie is, 'It can't be orgiastic if it's not organic.' "

"Does it have canons of form?"

"It does indeed. The first is that although it must look organic it must be abstract. If a house looks like mushrooms, they must be abstract mushrooms. If it looks like a bird, this must be a geometric bird. (Nothing so naïve as Mother Goose!) It's better yet if the house has *more* than one theme: like an abstract mushroom surmounted by an abstract bird. Paraphrasing Oscar Wilde, the Googie architect declares, 'When the public can't make it out, the artist is in harmony with himself.' "

"Does it have principles of construction?"

"Yes, Googie has set modern construction free. You may have noted for some time the trend in modern architecture to make light of gravity, to get playful with it. Googie goes farther: it ignores gravity altogether.

"In Googie whenever possible the building must hang from the sky. Where nature and engineering can't accomplish this, art must help.

"You note, for example, that a good Googie architect has no fear of starting a heavy stone wall directly over a glass-filled void. Taking his cue from store front designers, he laughs at anybody whom this might make uncomfortable. He knows that nothing need appear to rest on anything else, least of all on the earth; in Googie architecture both the glass and the stone are conceived to float. It is strictly an architecture up in the air.

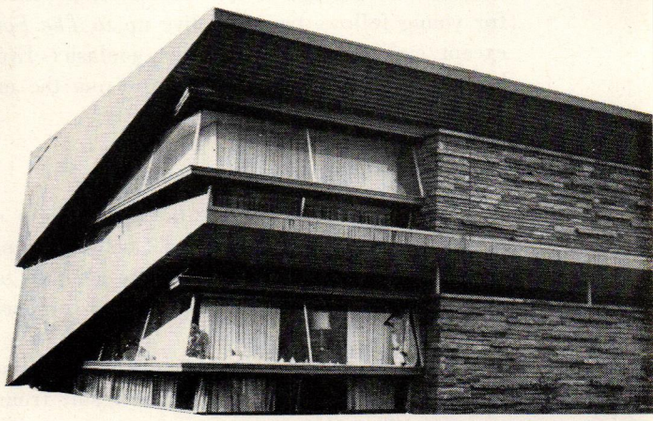
"Another Googie tenet is that just as three architectural themes mixed together are better than one, so two or three structural systems mixed together add to the interest of the occasion."

"What about materials?"

"Ah, yes. You may have noted how they have multiplied in modern architecture. First only three materials were considered *truly modern:* steel, concrete, and glass—especially glass. Now look at them all! Redwood and asbestos cement and glass block and plastics and plywood and more and more and more and more orchard stone! Need I expand the list? But Googie as I have said treats all issues with generous abandon. 'Why throw the coal into the furnace?' it asks. 'Why not into the wall? Why not build with string? Why not use *any*thing?' . . ."

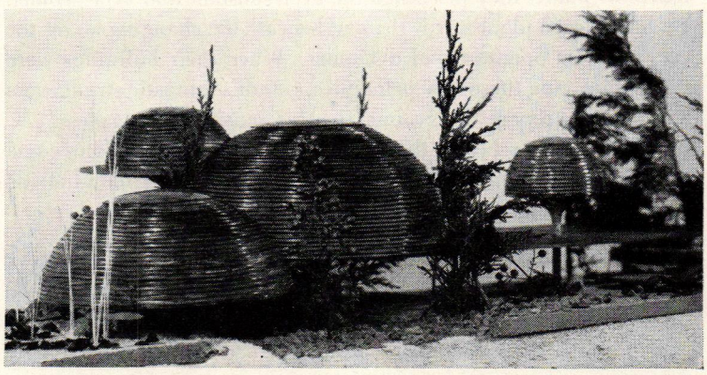
"What about equipment?" quickly interrupted the student.

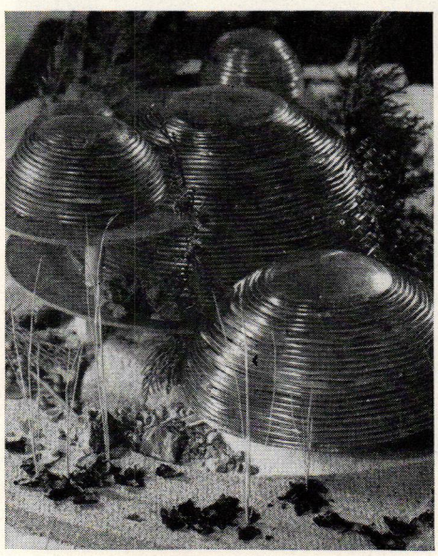
"Same freedom. To the inventions of the modern engineer, Googie adds all of *Popular Mechanics.* Walls that are hinged and



"It can have inverted triangle roofs but never a cornice. It ignores gravity altogether—has no fear of a heavy stone wall directly over glass." Apartments in Houston.

"If a house looks like mushrooms they must be abstract mushrooms. Paraphrasing Oscar Wilde, the Googie architect says to himself, 'If the public can't make it out, the architect is in harmony with himself.' " Student project.





roll out on casters, doors that disappear into the ground, overhead lights that cook the hamburger. . ."

"Stop! Wait!" cried the despairing student. "Just where in the name of Apollo can all this uninhibited incoherence lead?"

"Ah, well you might ask," meditated Thrugg, stroking his chin. "Well you might ask. Modern architecture has set building free. For every one good way of building that there used to be, there are now three new ones, with more coming around the corner. Almost anything can be done and *is* being done—so what is there for young fellows trying to live up to *The Fountainhead* to do except create this spicy Googie goulash? Even so, they have brought modern architecture down from the mountains and set ordinary clients, ordinary people, free."

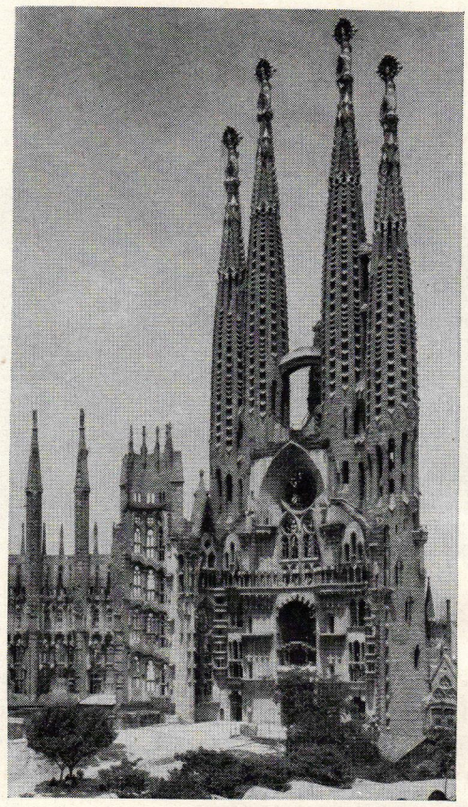
"Is that good—having the people free?"

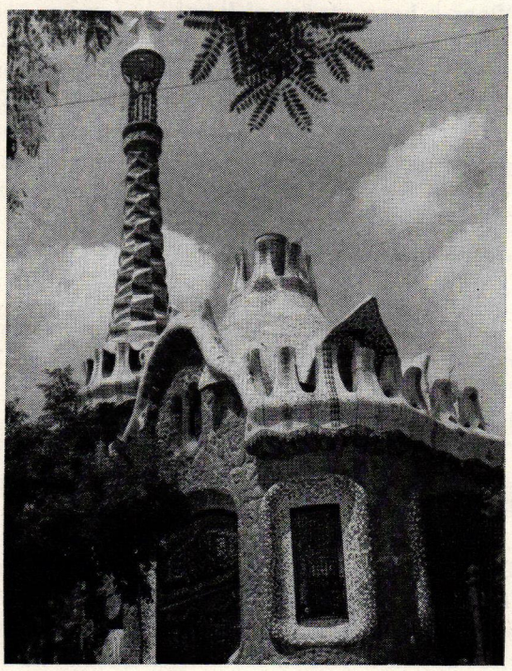
"No and yes. No, because the people have neither education nor leaders to guide them. Caught between numbskull appraisers of the FHA on one side and Googie geniuses on the other, how can they know their way? There are no responsible critics in the middle!

"But again, yes, it is good, and for two reasons. One is that sometimes fantastically good ideas result from uninhibited experiment. The other is that Googie accustoms the people to expect strangeness, and makes them the readier for those strange things yet to come which will truly make good sense." Thrugg paused.

"Let me tell you a story. One hundred years ago in Spain was born a strange genius, Antoni Gaudi. He built cathedral towers that resembled weird plants and shocked everybody. Gaudi and his friends were interested in reproducing the more superficial appearance of nature—the beautiful lines of waves, the ever sensitive contours of leaves. But Gaudi got people accustomed to looking away from the immediate past and towards nature. Soon a more deeply searching generation came. Beneath the changing leaves of plants they discerned the ever constant and ever geometric law of each plant's growth; and beneath the changing waves the ever constant operations of dynamics. When *their* buildings were ready, applying these new principles, Gaudi's fantastic strangeness had helped prepare the ground for this sensible strangeness.

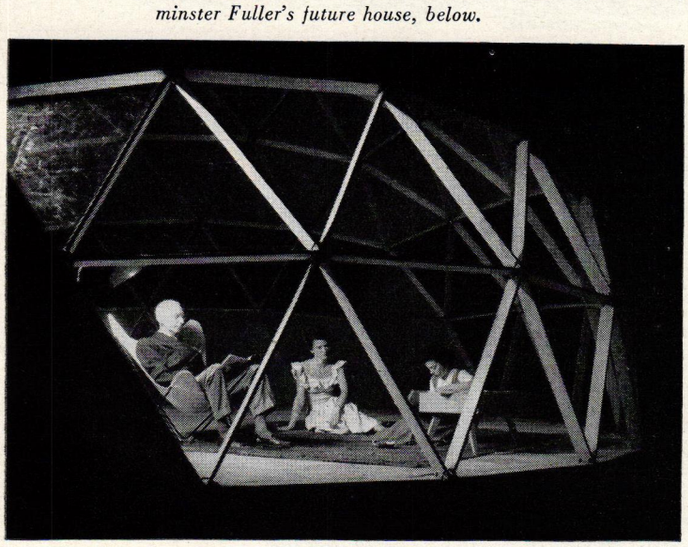
"So something better than accidental discoveries might come even from Googie. It's too bad our taste is so horrible; but it's pretty good to have men free. . . ."





Nicolas Muller

Just as Gaudi's fantastic strangeness (right) prefigured our organic architecture, so Googie architecture can prepare the ground for sensible strangeness yet to come—such as Buckminster Fuller's future house, below.





Born 100 years ago, Spain's architect Gaudi imitated outward aspects of nature's plants, waves; his successors studied nature's underlying laws.

JOHN LAUTNER'S HOUSES take all Hollywood as a stage

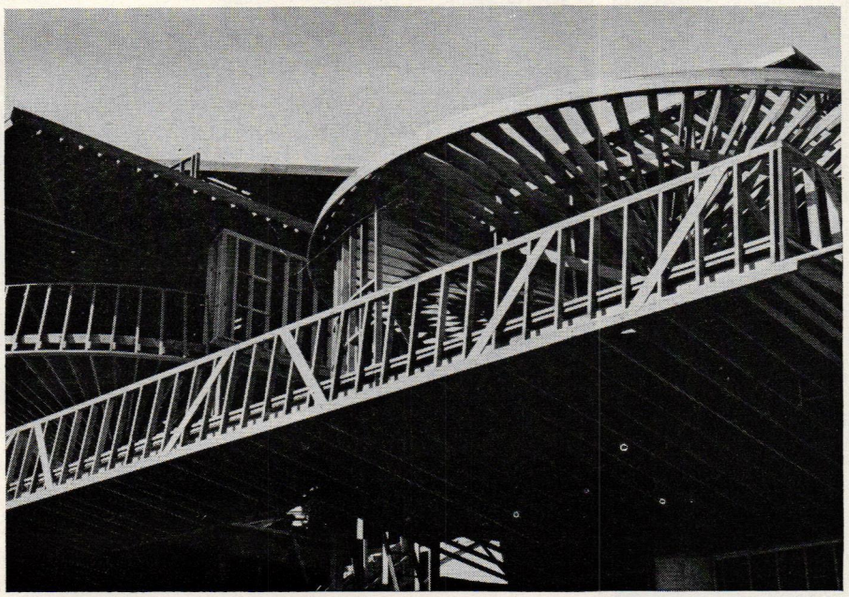
L'HORIZON APARTMENTS

LOCATION: Westwood, Calif.
JOHN LAUTNER, Designer

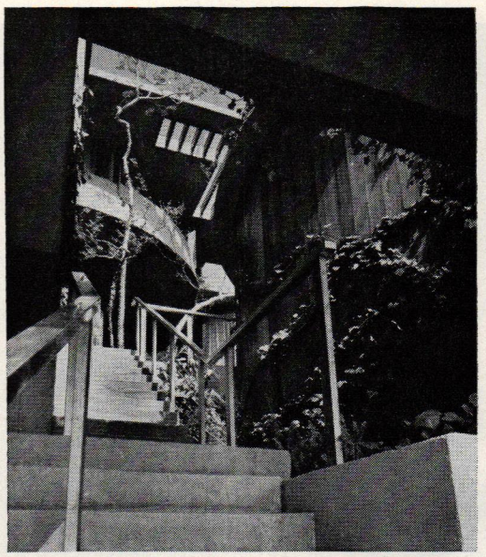
Designer John Lautner is really a serious man who believes that architecture should be free. His work shows how far a "free-wheeling" treatment of free forms—some of them evolved by the genius of great architect Frank Lloyd Wright—can go. Though HOUSE & HOME's editors would prefer to go not nearly so far, they believe that serious designer Lautner should no longer be officially ignored. Can this, or can it not, be the future of serious architecture?

Here's Lautner's telegraphic description of aptly named L'Horizon apartments: "Owners, a professor and wife, want a short walk and a long view to UCLA campus. Eight apartments, about 900 sq. ft. each, include private terraces. No common walls —apartments seem like separate houses; full perimeter has light and air. All apartments entered from easy winding ramps. Interiors without bearing walls make redivision of rooms possible."

Steel frame floors and roofs are supported on concrete columns, below, taking lateral wind and earthquake loads.



Photography House Studio



Entrance stair rises between carports on upside of street; opens view to Piranesian maze of ramps, trellises.

View from street invites the beholder to lose himself in reverie, adoration, or other emotions.

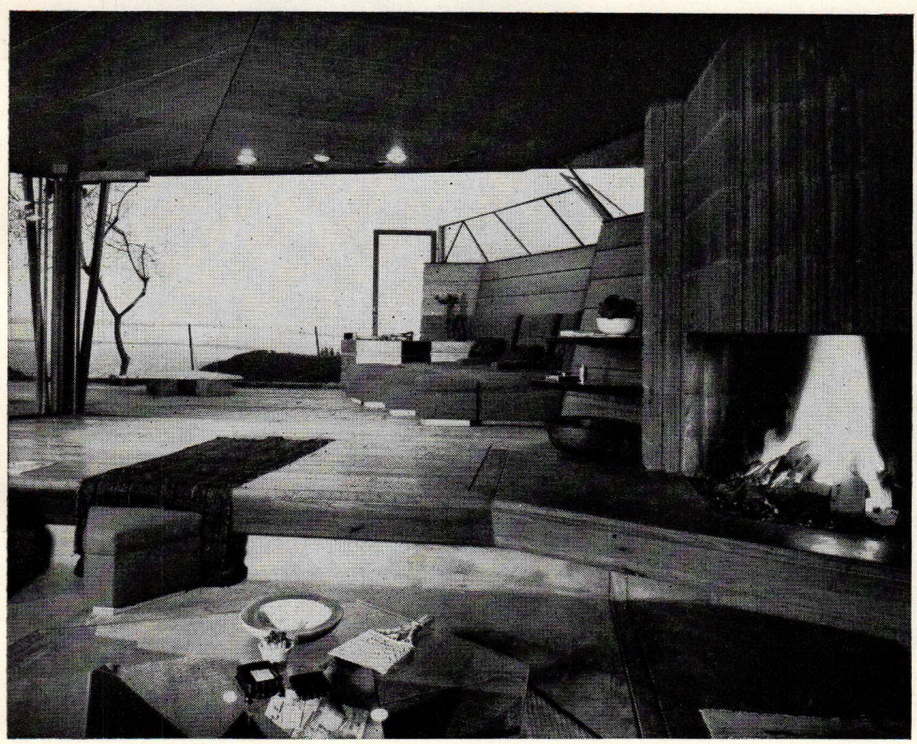
Donald J. Higgins

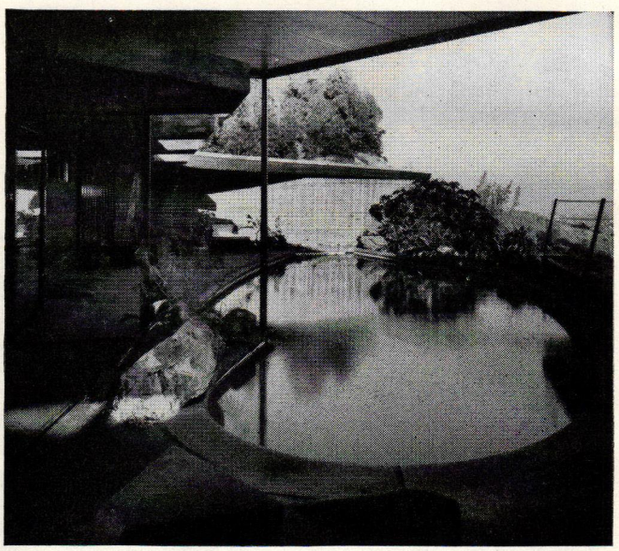


AMPHITHEATER HOUSE

LOCATION: Los Angeles

A surprising inventiveness is found in this "amphitheater" house which looks architecturally more like an operating stage set than a customary dwelling. It is for a bachelor enjoying a hilltop with a pool, and a sweeping two-way view. The roof is virtually a braced and independent structure—a pattern of steel beams held like a suspension bridge from braced steel columns at the corners (*bottom photo, left*). Since the walls support nothing, one of them can be swung out on hinges to survey pool and view, swung back again to close the room, in either case creating an "amphitheater." A kitchen in the center (not photographed) has 36′ of counter space; the owner's bedroom is the only private enclosed area. The southeast exposure makes this a "solar house," says Lautner—the radiant electric heating was used only twice last winter.

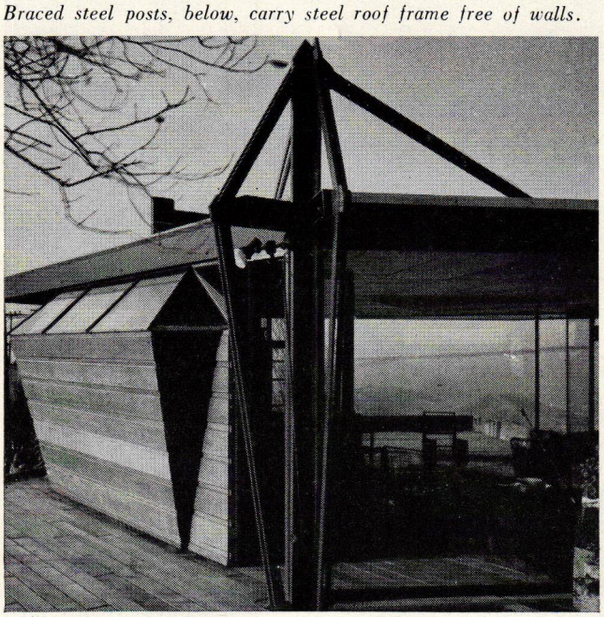


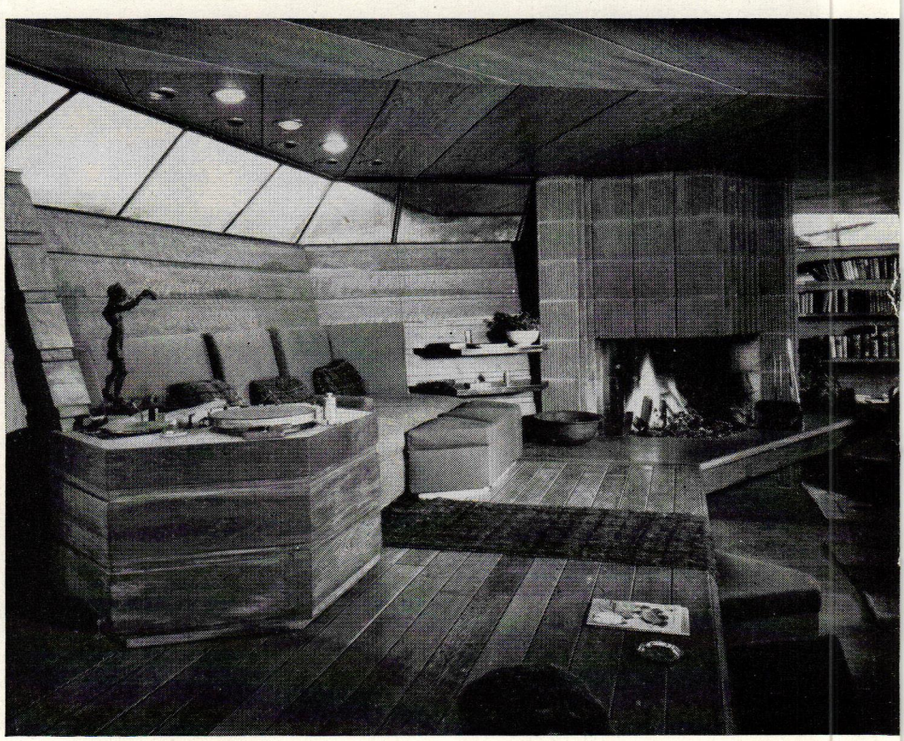


When hinged wall is rolled out (photo at left) it widens the stage to include a board terrace and the swimming pool seen above.

When hinged wall is rolled closed, it adds another level of seating height to the raised floor which fronts the fireplace, below.

Braced steel posts, below, carry steel roof frame free of walls.





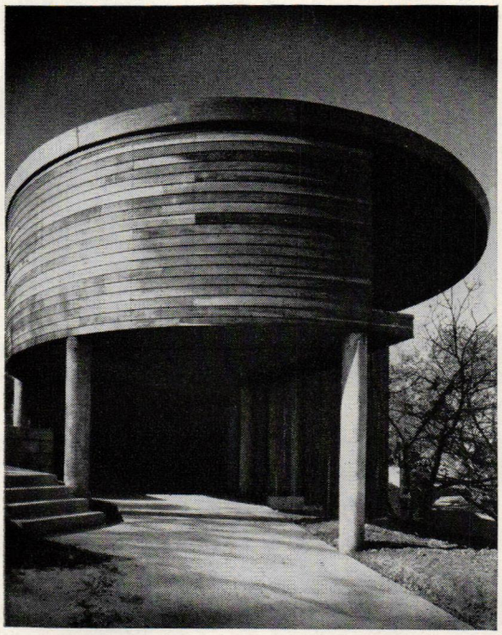
THE ROUNDED BLOCKHOUSE

LOCATION: Sherman Oaks, Calif.

Not a shipping crate or fort but a hilltop house for a single lady, this astonishing house is built around the kind of wheel-spoke frame for floors and roof which Lautner once again finds irresistible. This time it's framed in wood, and the whole house is lifted off the ground for a better view and privacy. The house is carried on concrete columns that were poured in cardboard tubular forms. The columns saved Lautner from building retaining walls. As for the exterior curved shape, Lautner found that ½" redwood siding would easily take the bend; it was nailed with lead-headed nails.

Built in the midst of existing neighborhoods, Lautner's houses of this kind raise a question: are residential streets of the future to be as exuberant as today's highways lined with the fantasies of gas station and roadside nightclub?

Donald J. Higgins



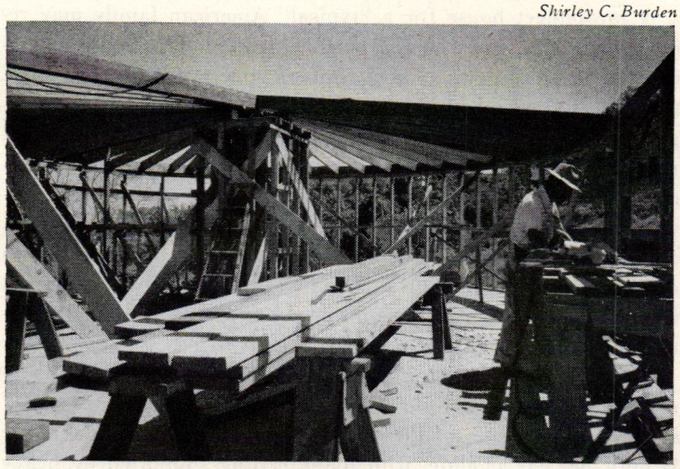
Its walls bent with the informal ease used in creating a shipping crate, the house has surprises such as the carport canopy, the off-center curve of roof with chapeau on the sunny side only.

Shirley C. Burden

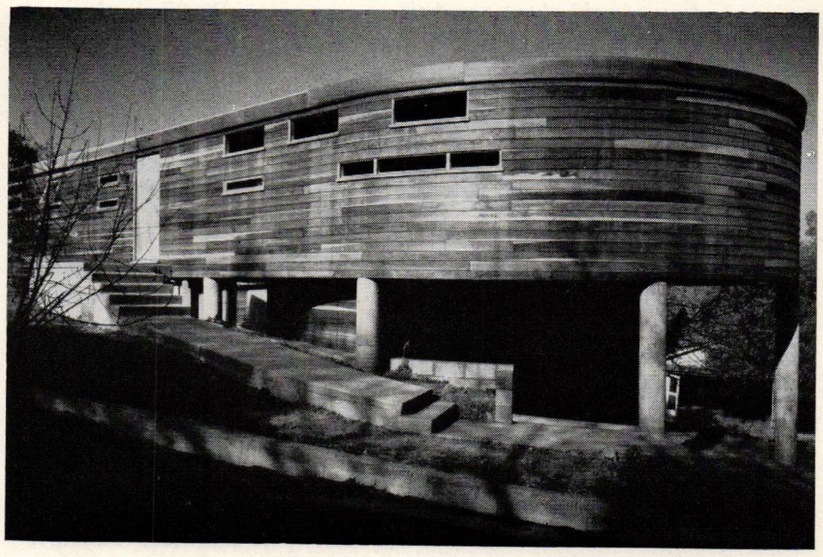


Though rafters are easily cut and set for wheel shape, some special cutting and fitting had to be done on peripheral framing members.

Shirley C. Burden



The fact that a tremendous excess of lumber and of framing strength accrues at the hub of such a plan is a minor factor. Contract cost was $10,000.



1. IN-LINE PLAN FOR A SUBURBAN HOUSE

It has well organized space for a variety of activities

LOCATION: Raleigh, N. C.
GEORGE MATSUMOTO, Architect
FRANK WALSER, General Contractor



Photos: Joseph W. Molitor

*How the in-line plan can work for both economical construction and unusually well organized living space is shown in this house and the one on pages 96-97. Both were designed by Architect George Matsumoto, young associate professor in the North Carolina State College School of Design and veteran prize-winner, who last astounded a jury when his entry in the NAHB-*FORUM *House Design Competition (Mar. issue '51) squeezed an extra 12′ x 12′ room into the over-all 1,000 sq. ft. limit.*

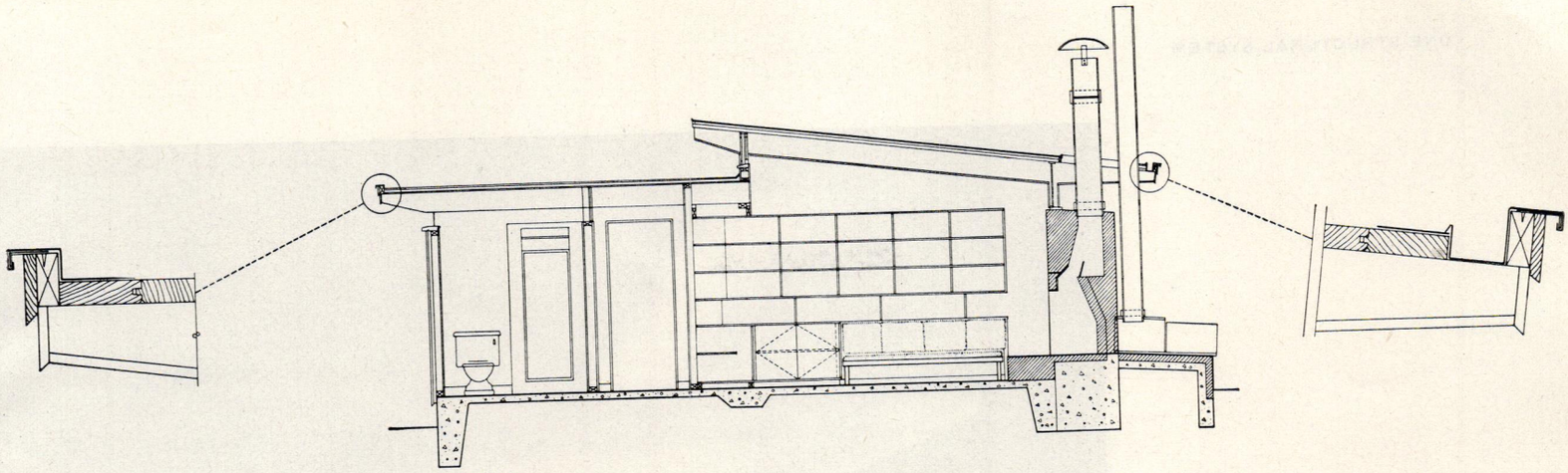
While each serves a completely different purpose—this one a year-round house for a family with two children, the other a week-ender for a couple—they are alike in two more important characteristics which may well influence the future of small house designs. Both use simple, rectangular shapes, partly for economy and partly because, says Matsumoto, "You are never far enough away from a small house to get the benefit of breaks in form or interplay of building masses. Jigs and jogs would just make the whole look overly busy."

Both have nice structural treatment (post and beam framing), and interesting materials. "Since your view *is* a close-up, the details are important."

A low-budget house for a "typical" American family may require many assets of a purely personal nature. This house was no exception: 100 sq. ft. of book storage space; protection against termites and wood-borers (the owner is a professor of entomology); multipurpose area complete with storage space; daughters' rooms convertible into one big play space. In addition, several requirements of a more general nature: outdoor terrace with fireplace-cooking grill; overnight guest accommodation; bathrooms arranged to carry a 7 A.M. peak load; weather control based on cross ventilation. To tie all this up in a neat design package called for careful planning from the inside out and equally careful attention to details.

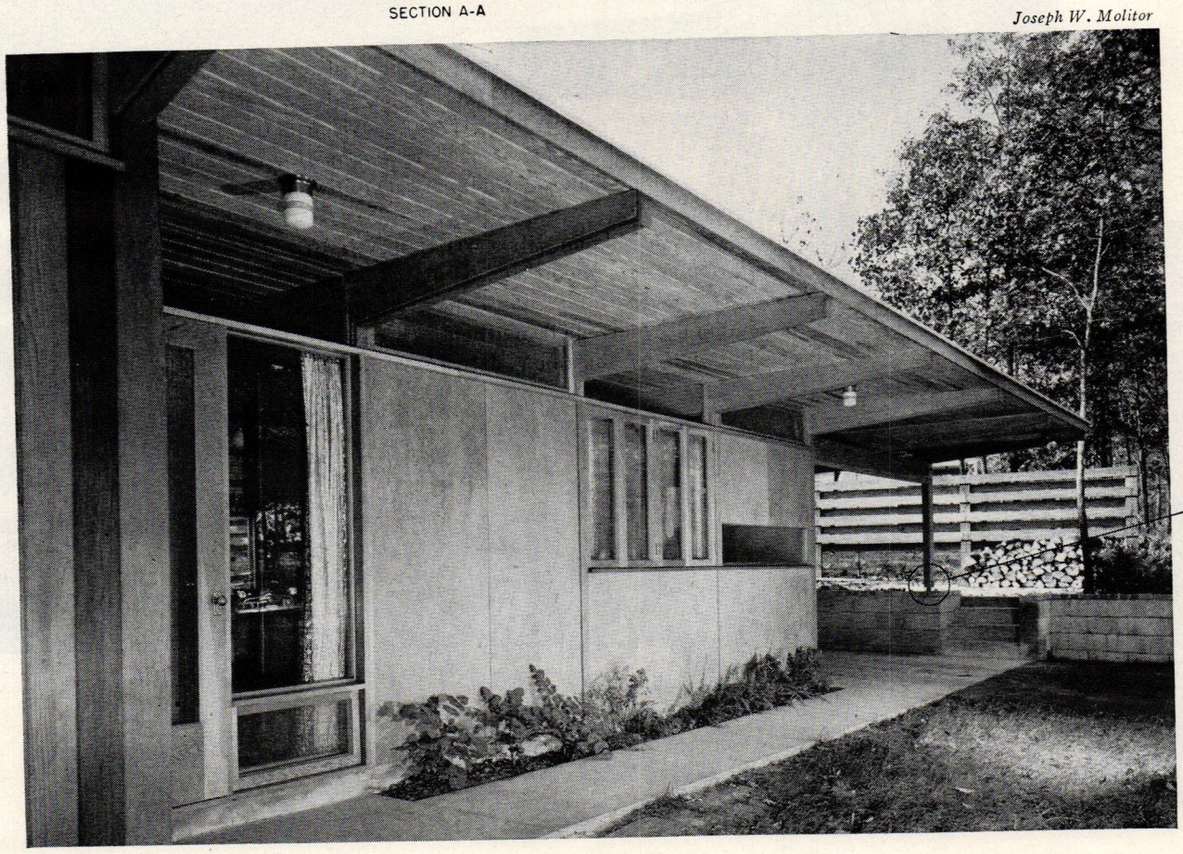
Construction technique: All of the major rooms are lined up under a clerestory, and the utility rooms are lined up in a "shed," a modern expression of the old New England leanto. The house is built on a 6′ module, with plank ceiling supported by heavy beams carried on posts set 6′ apart. One-half module, or 3′, is the width of the plywood panels used throughout the interior.

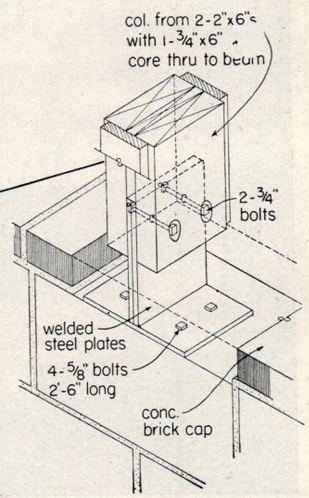
Floor plan: With the L-shaped master bedroom wrapped around

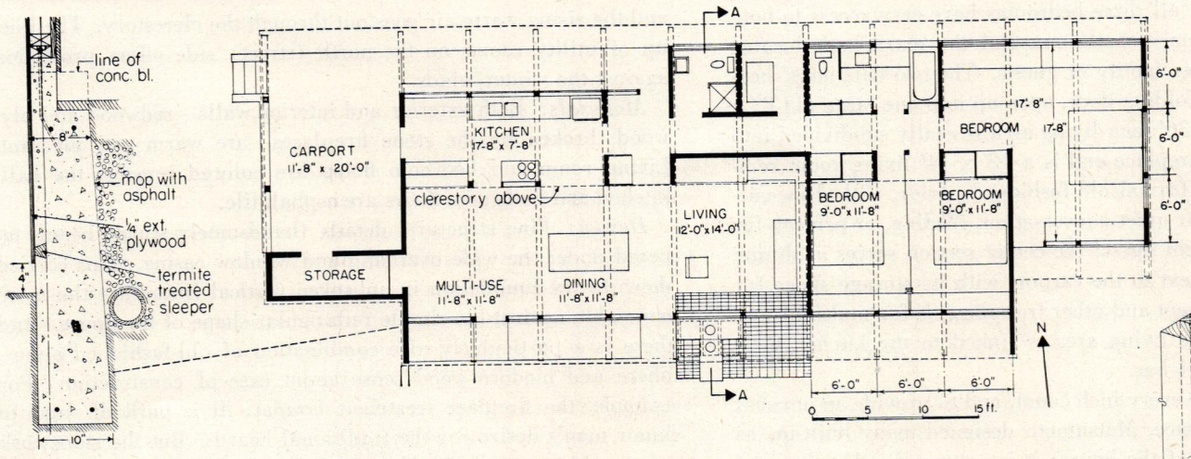


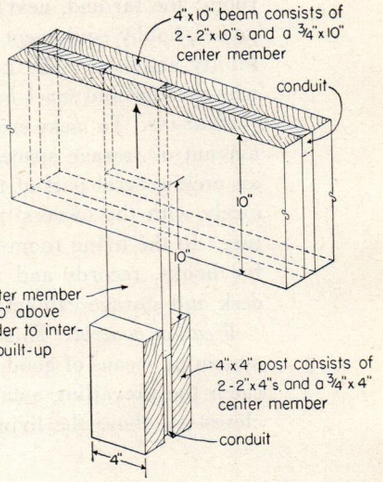
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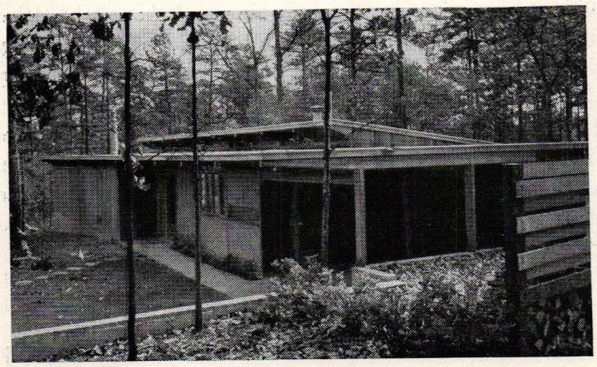
Joseph W. Molitor



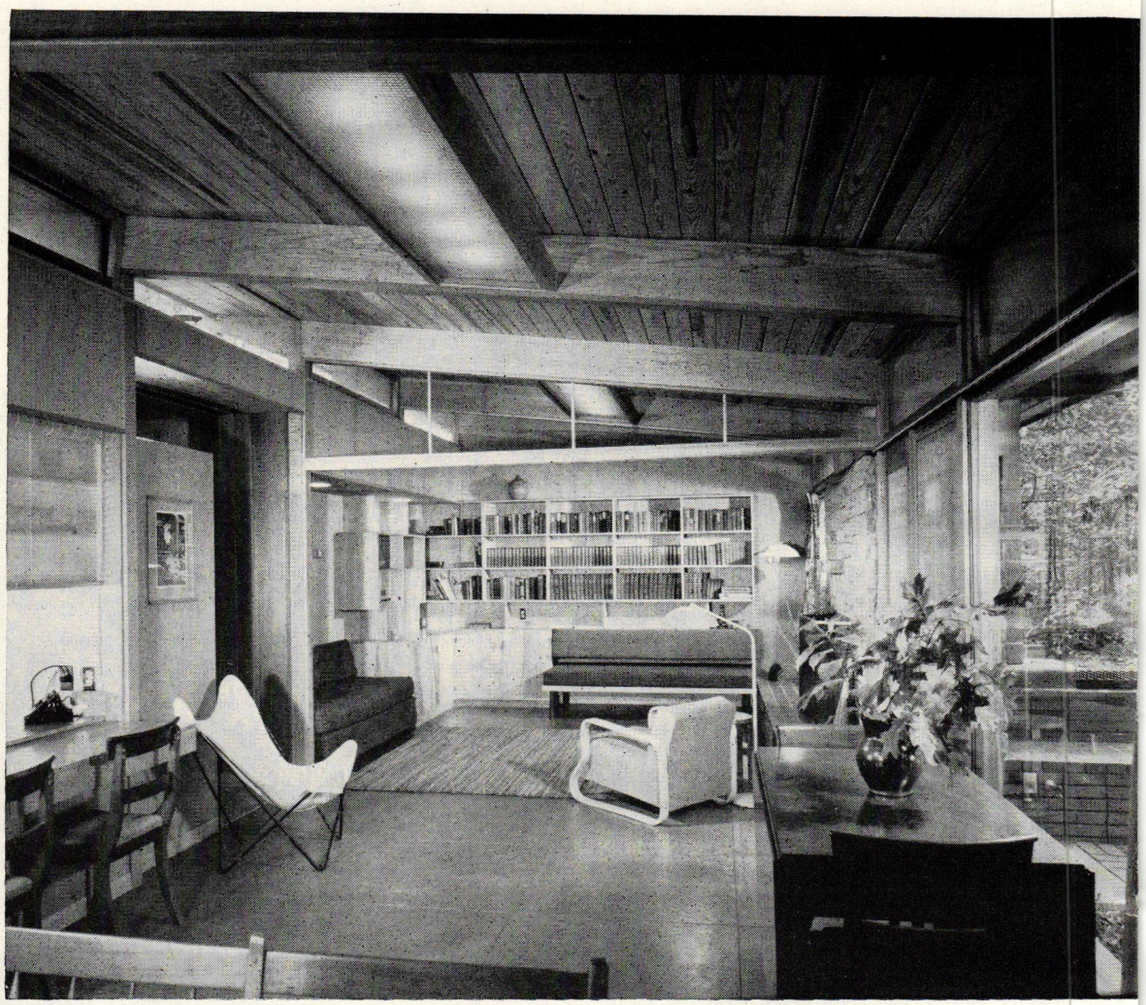


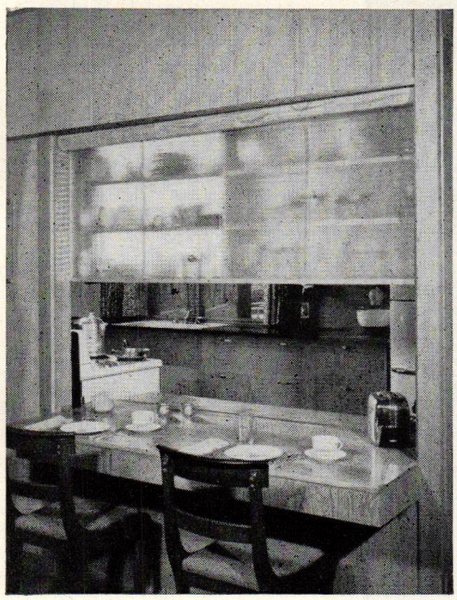






Simple rectangular shape avoids jigs and jogs which make a small house busy. Structural details (photo above) are also design features, make the difference between rawness and elegance.





"Parlor" end of 36′ long living room above is a quiet spot for conversation, reading, music; also serves as guest bedroom. Dining area and snack bar (left) separate it from multiuse area. Window wall ties it to terrace and wooded site.

the end of the house, all three bedrooms have easy access to both the two-passenger family bathroom and the extra bath located conveniently for either family or guests. The two daughters' bedrooms, divided by a folding door, open up into one large (11′8″ x 18′) playroom. The 36′ long living area is neatly subdivided into three zones: at the fireplace end is a 12′ x 14′ living room reminiscent of the more formal old-fashioned parlor, with draw-curtains to close it off for quiet conversation, reading, or privacy for an occasional overnight guest; the center section serves as dining room; the far end, next to the carport with its storage space for games, hobby equipment and other trappings, is for multipurpose family activities. The living area is linked to the kitchen by a pass-through and snack bar.

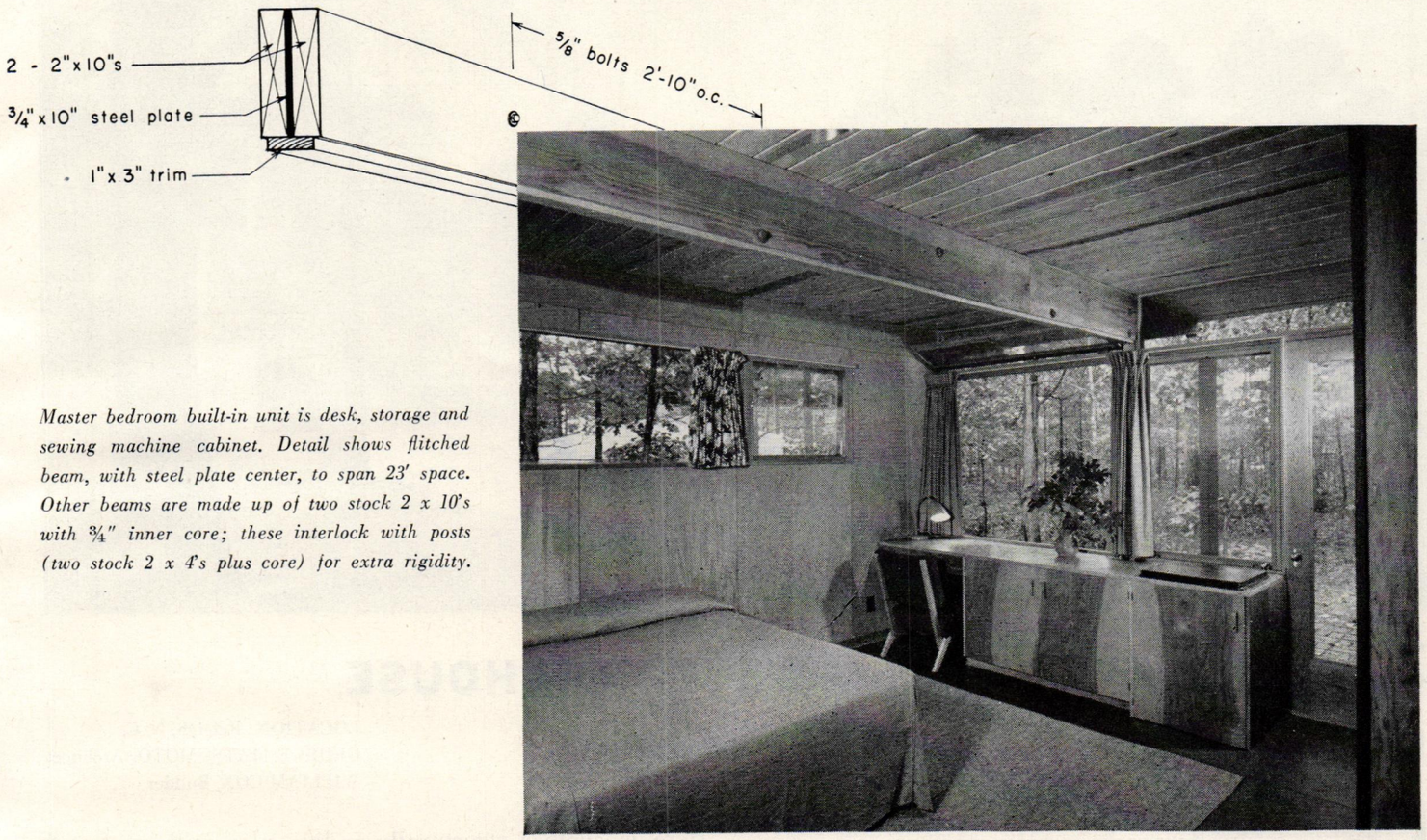
Built-ins: To make every inch count, and to provide an unusual amount of storage space, Matsumoto designed many built-ins as an architectural part of the house; it is noteworthy that these go nicely with the owners' modern *and* American traditional furniture. In the living room there are handsome shelves and cabinets for books, records and radio-phonograph; in each bedroom, a desk and storage cabinet; all are of birch plywood.

Weather control: This house makes use of nature's own cooling system by means of good orientation (all major rooms face south, catch the prevailing summer breezes), cross ventilation and the clerestory above the living half: breezes come in from the south and the rising warm air goes out through the clerestory. The line-up of utility rooms on the north (street) side offers protection against the winter winds.

Materials: Both exterior and interior walls—redwood and plywood, broken by the stone fireplaces—are warm and pleasant. Living room and bedroom floors are colored cement; the hall, kitchen and bathroom floors are asphalt tile.

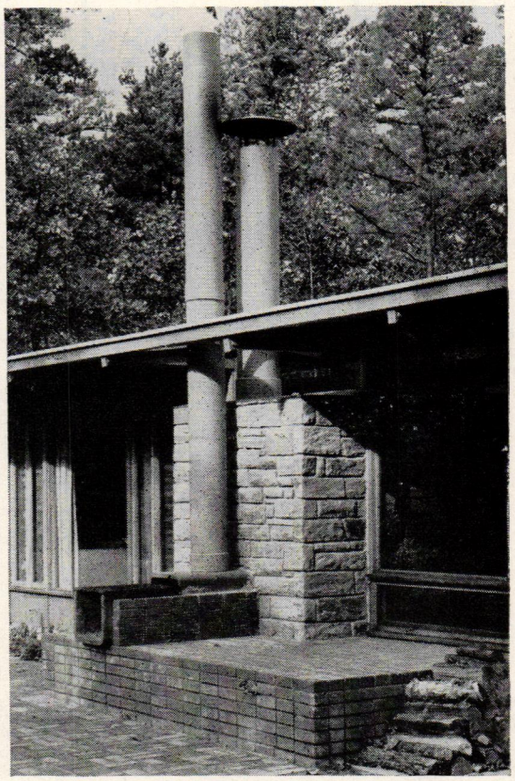
Design: Fine structural details (handsomely sturdy beams tapered under the wide overhang and window casing strips carried down to the foundation in unbroken vertical lines) are the more enjoyable against the simple rectangular shape of the house. And there is a particularly nice combination of old-fashioned atmosphere and modern good sense about ease of construction. For example, the fireplace treatment (*right*). It is built of stone to honor man's desire for the traditional hearth. But the stonework stops at the transom bar to avoid flashing and the complication of masonry meeting roof—and, incidentally, to give a tantalizing view of sky and treetops, and an orange painted pipe as jaunty as it is practical.

Finally, the house is suited not only to the way the family likes to live, but also to its heavily wooded site. (Only one sizable tree, a damaged oak, was removed.) Its long, low, clean lines are softened by the tall trees, and the total effect is a house that naturally belongs where it is.

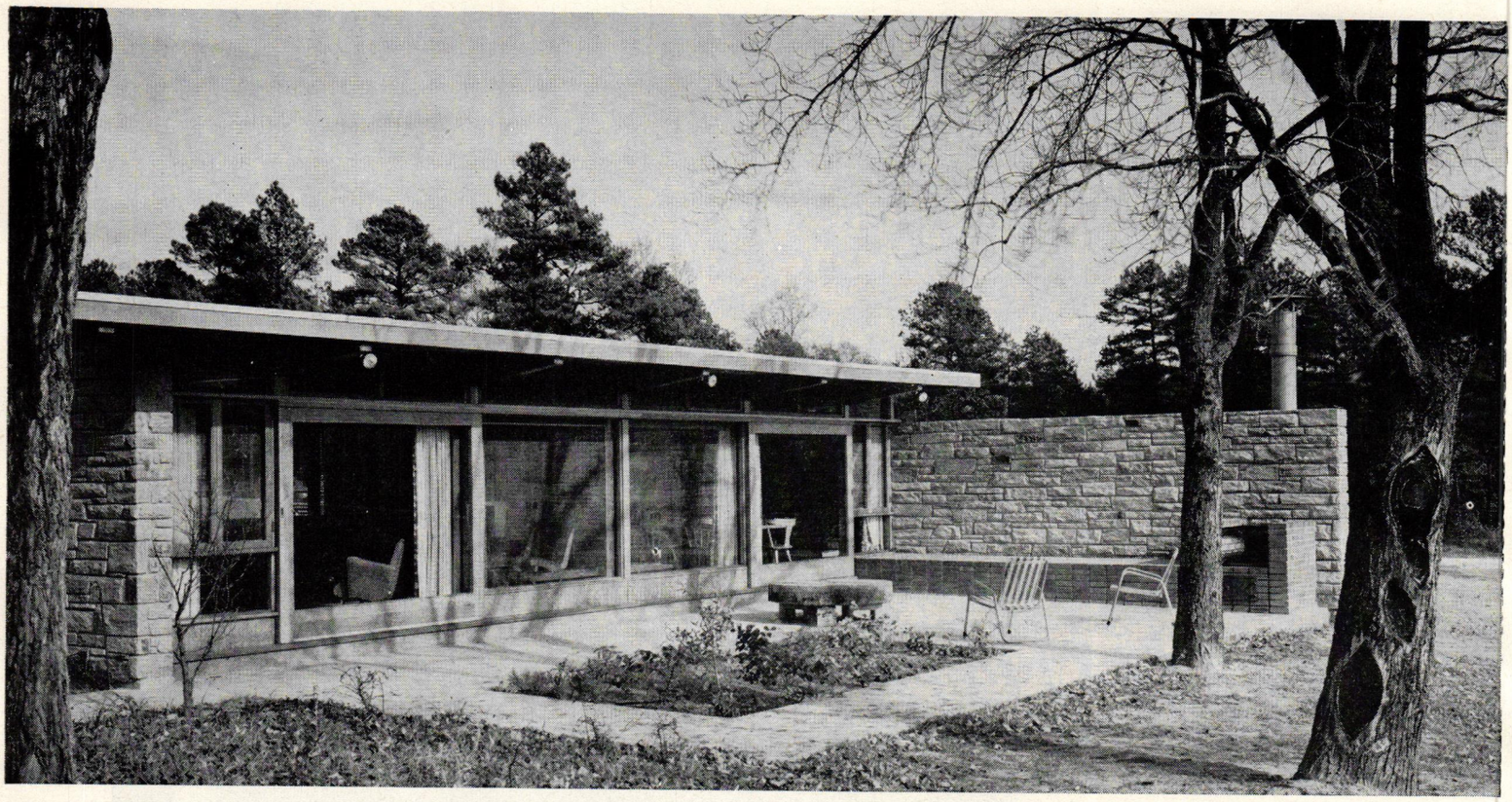


Master bedroom built-in unit is desk, storage and sewing machine cabinet. Detail shows flitched beam, with steel plate center, to span 23' space. Other beams are made up of two stock 2 x 10's with ¾" inner core; these interlock with posts (two stock 2 x 4's plus core) for extra rigidity.





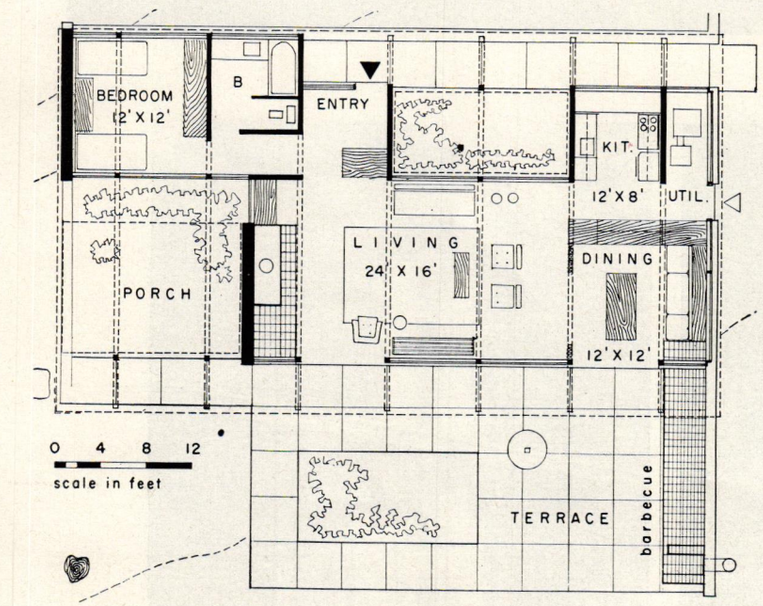
Indoor and outdoor fireplaces back each other; the stone at left has nice texture interest, the pipes above are honest, practical, economical.

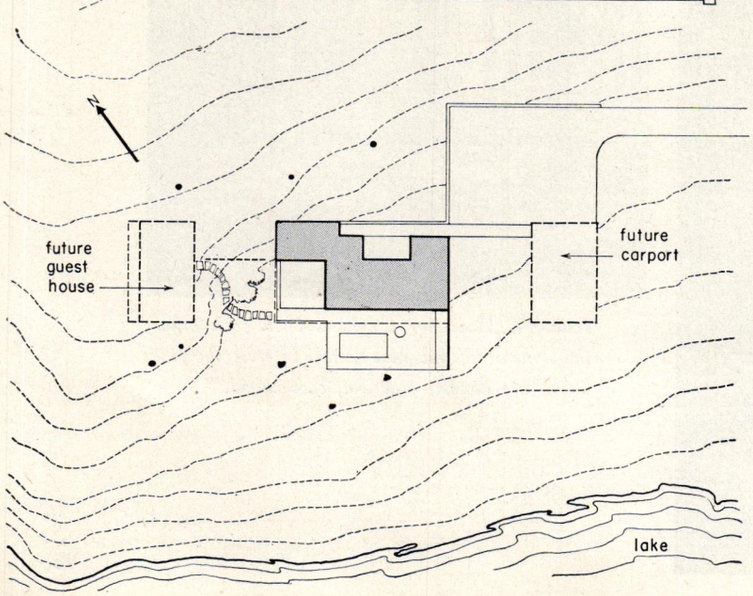


2. IN-LINE PLAN FOR A WEEK-END HOUSE

It has one big room for parties, one bedroom for the owners

LOCATION: Raleigh, N. C.
GEORGE MATSUMOTO, Architect
WILLIAM COX, Builder





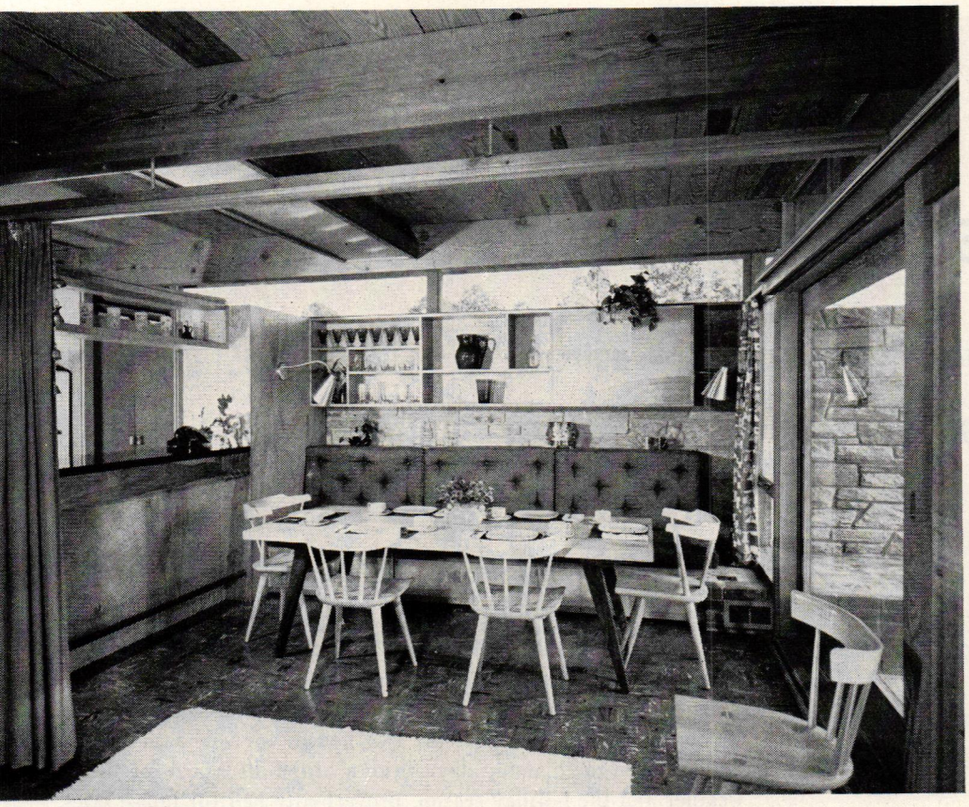
Here is another structurally in-line plan with post and beam framing. It shows what multipurpose space planning and cleverly designed built-ins can do: one end of the big living room serves as bar, dining room and guest sleeping quarters. It is easily maintained. Its design interest comes not from fussy "trim," but from structure and materials. It takes full advantage of its site and the view across a small lake.

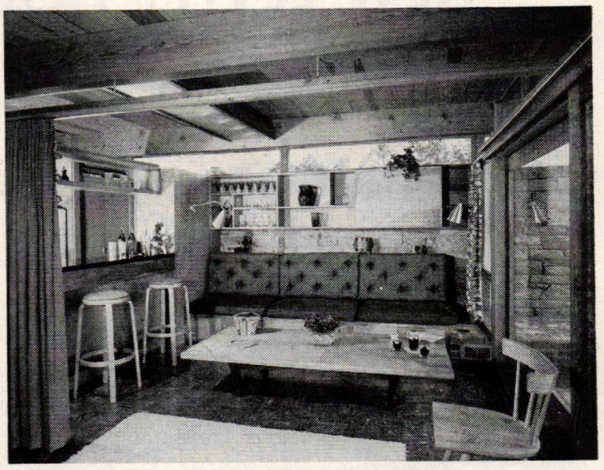
Such a satisfactory solution to a special problem results only when client and architect work together. In this case, the owners knew exactly the kind of house they wanted for week-end relaxation and occasional big parties, and had George Matsumoto translate their desires into good architecture.

First of all, the house had to be small and built for easy housekeeping. This was accomplished by built-in and double-duty furniture and by a plan with only two basic spaces: 1) the bedroom and bath for the owners and 2) the big room for living, dining, cooking. Since outdoor living was important to the owners, the terrace, facing the lake, was planned as an extension of the living room and equipped with fireplace-grill.

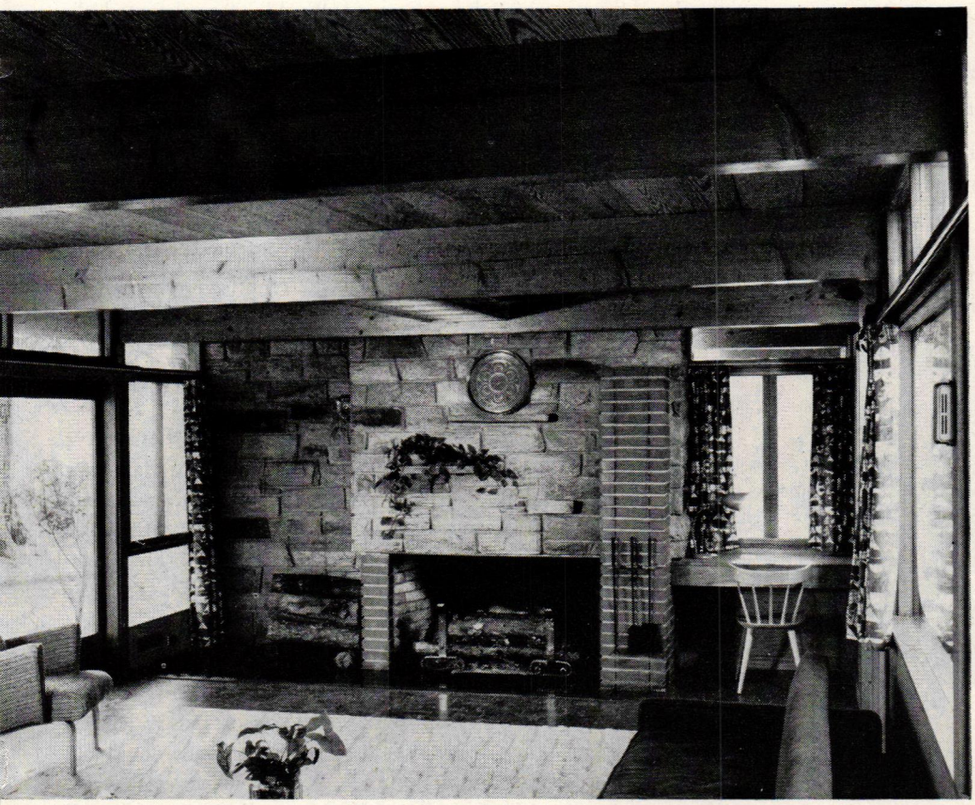
Weather control was another major consideration. The house faces south-southwest, catches the prevailing summer breezes and makes the most of them by direct cross ventilation. There is extra summer cooling via 2″ of water on the roof.

The design is clean and simple, with full use made of structure, materials, site. One example of structural usefulness and visual interest is the stone wall extending from the dining area on across the terrace. It serves as windbreak for the terrace and makes the living room seem wider by carrying the eye on outdoors. Other noteworthy small details include the lights on the underside of the overhang which make the lake view a part of the house at night.

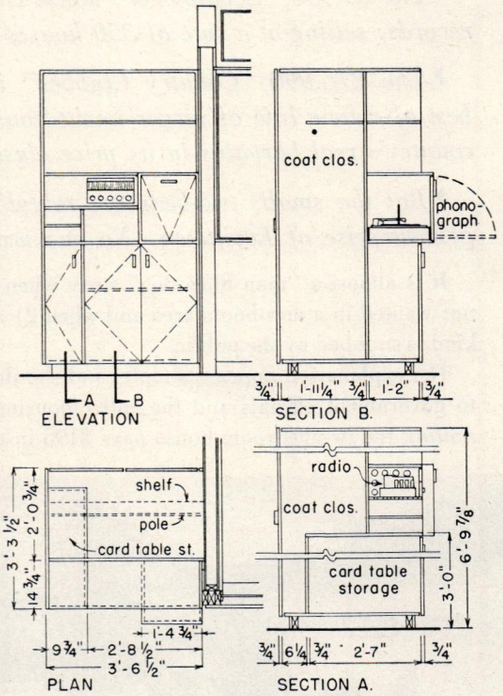


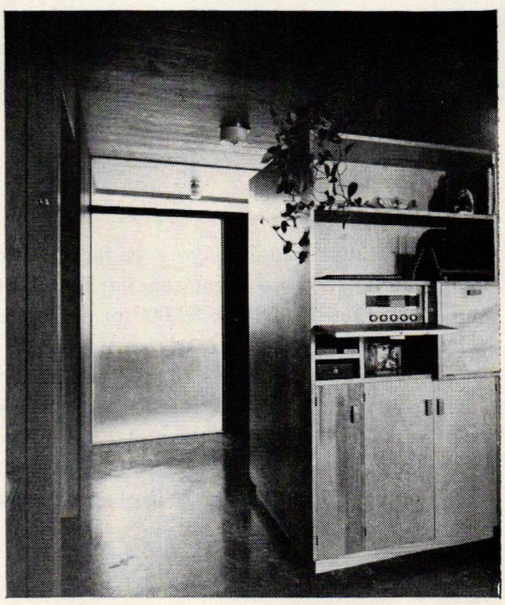


Dining end of living room also serves as bar (left, open to kitchen) and guest sleeping quarters. Table has folding legs, can be lowered to cocktail level (picture, above right); couch is on rollers, has blanket storage space beneath.



Fireplace end of living room has built-in desk. Fabrics are sturdy, textured; chief colors orange, beige, green. With window walls on both sides, room is open to the view.





Ingeniously designed birch plywood cabinet houses radio-phonograph and records, card tables, coat closet (see drawings); also forms a small separate entrance foyer.

NEW LEVITT HOUSES BREAK ALL RECORDS:

Nearly 3,000 sold in two months, but rental units go begging as families buy $9,990 and $16,990 bargains

When Bill and Alfred Levitt bring out a new model they always have a front page story.

Their three new designs for Levittown, Pa.—in the best Levitt tradition—are so significant that they are not one news story but several.

▸ *The $9,990 "Levittowner" house is breaking all sales records: selling at a rate of 350 houses per week.*

▸ *The $16,990 "Country Clubber" is the newest and best of a long line of larger Levitt houses and one of the country's real bargains in its price class.*

▸ *But the small, two-bedroom rental house is the biggest surprise of Levittown. No one wants it.*

It is almost a "man bites dog" story when 1) a rental house is not wanted in a new-boom area and when 2) a Levitt house of *any* kind is snubbed by the public.

The explanation appears simple, and should be of great interest to government officials and the entire housing industry: a family *renting* the two-bedroom house pays $195 in advance and $65 per month in rent. A family *buying* the larger (and far better) $9,990 house has a down payment ranging from nothing (for veteran-defense workers) to $600, $1,000 or $1,500, and then pays only $59 or $60 per month.



Exhibition building was sales office and also had samples of all materials used in the houses.

When given such a choice the public's overwhelming preference is clear. By the time 1,300 families had bought the $9,990 house, exactly one had signed for the rental unit. People who don't have the down payment will apparently beg, borrow or steal to get it—and then they own (in name at least) a fine, three-bedroom house, which should increase in value, as contrasted with the renter who pays $5 more per month and finishes with "a bunch of rent receipts."

The smashing success of the two houses for sale was easy to predict from the opening day. With a blithe disregard for winter weather and the holiday season, proverbially bad for house sales, the Levitts unveiled their new houses two weeks before Christmas. They had advertised in Philadelphia, Trenton and some local newspapers but no one, especially the police chief of next-door Tullytown, expected a crushing migration of 50,000 visitors for the first week end. It was clearly Tullytown's biggest day since some local boys, assisted by General Washington, defeated the British during an earlier Christmas holiday at the Battle of Trenton.

Of the 50,000 people, more than 200 families made cash deposits and signed for a house. Since then sales have been so continuous that Bill Levitt expects this year's production of 5,500 houses (5,000 of the Levittowner and 500 Country Clubbers) will be sold by late spring.

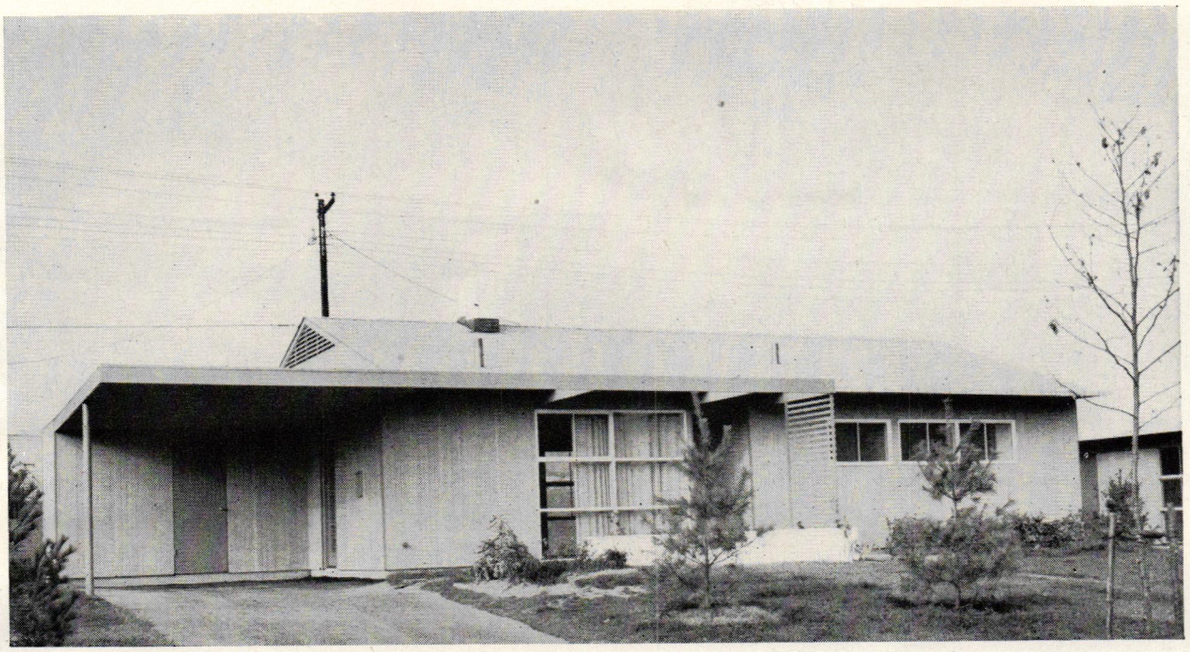
With this impressive sales record buoying him up, and ahead of him the gigantic task of building a city for 60,000 population in three years, Bill Levitt sheds no tear for the rental house. "We offered rental houses in Pennsylvania because everyone in the government insisted that people wanted them," he says. "This $65 rental house is the very best we could do. We are adopting a watchful waiting attitude and we may build some later.

"I believe it is a fraud to *make* a man rent a house," Levitt says emphatically. "He doesn't rent his clothes or his car or the other things he needs. Our Levittowner is a much finer thing than renters could get, and actually costs them less money, because they get income tax credit on the interest and taxes included in their monthly payments."

WHO BUYS THE MORTGAGES?

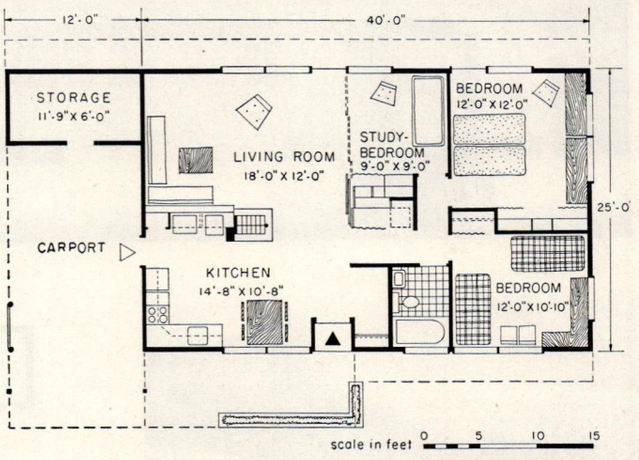
The Levitts seem to be less affected by fluctuations in the mortgage market than most other builders. As he has since 1932, Jack Halperin is again handling the Levitt paper. He is the country's largest mortgage broker and his estimate of why he can sell Levitt mortgages is worth recording. The Levitts' excellent reputation is obviously an important factor, he says. *But their progressive designs are also a great asset because in the years ahead Levitt houses will be less out of date than old-fashioned houses built at the same time. The whole Levitt concept of community planning adds very real value to their houses.*

Another asset, Halperin believes, is the kitchen equipment. A family that gets a well equipped kitchen as part of its mortgage is less likely to get into trouble over payments than if it is buying numerous items on short term installments.

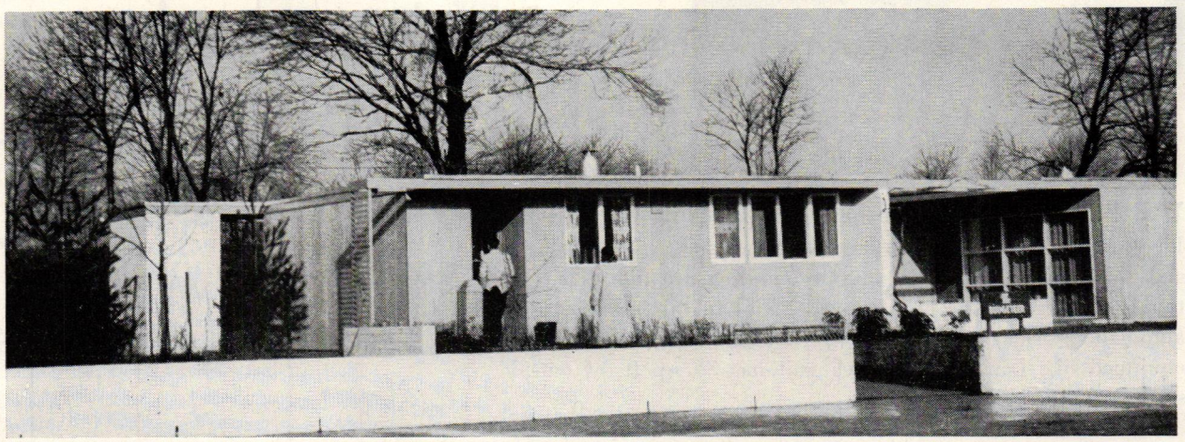


They do want to buy this house for a low down payment, $60 a month charges

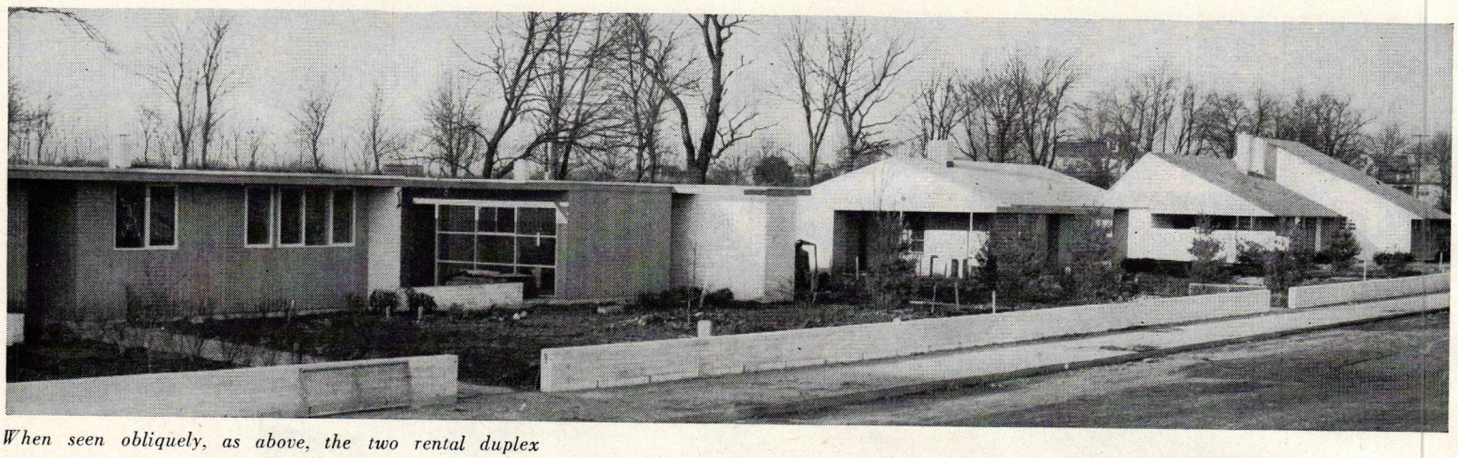
The Levittowner above (described exhaustively in Oct. issue '51) is a remarkable bargain at $9,990. It has three bedrooms, a large living room with fireplace, kitchen which has refrigerator, electric stove, automatic clothes washer, ample dining space. House has hot water radiant heated slab, double glazed windows, carport and outside storage, plus many extras. With its large windows, efficient floor plan, and landscaped 70' x 100' lot it is such a good buy that smaller house, below, suffers by comparison. Great, unseen assets are community facilities.



They don't want to rent this house for $65 a month

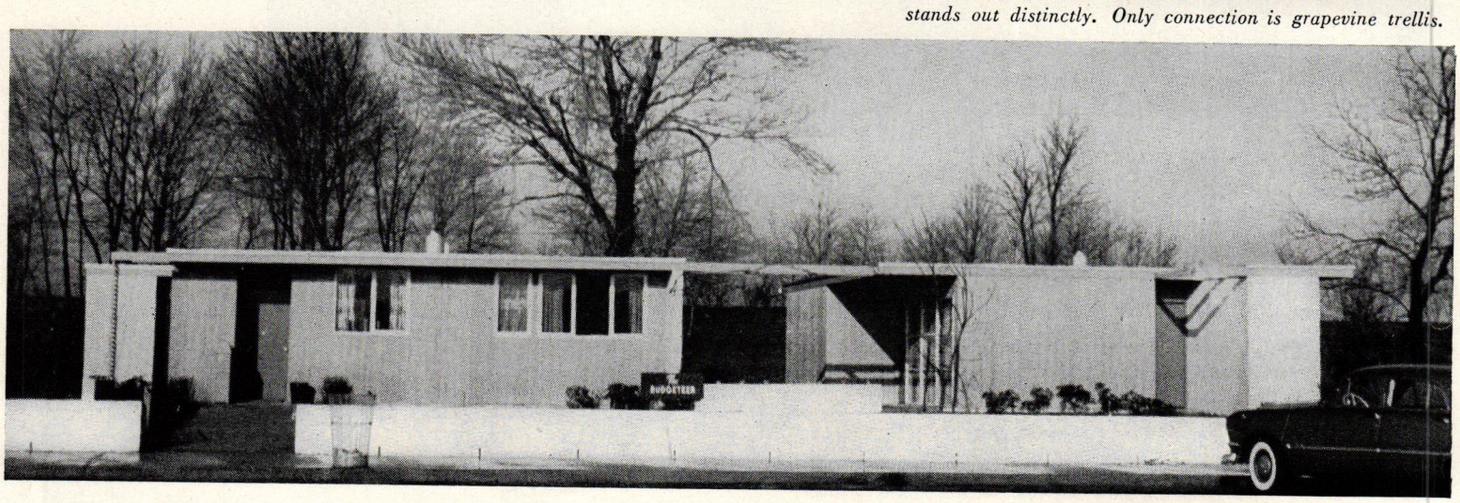


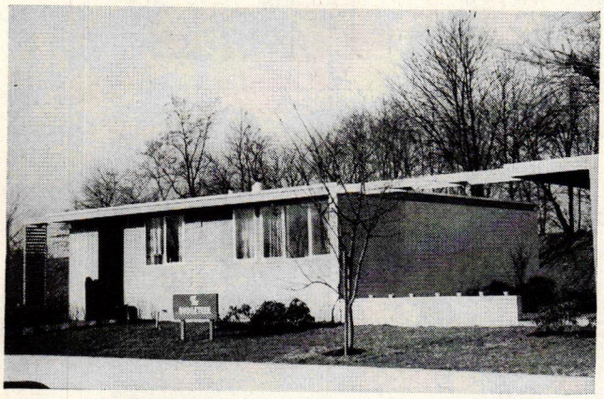
Two rental houses above might rent successfully elsewhere but not in proximity to a bargain house for same monthly payments. To get costs down, Designer Alfred Levitt gave the rental "Budgeteer" a flat roof, an innovation in Levitt design. Two houses are joined by a grapevine trellis, as photos on next page reveal.

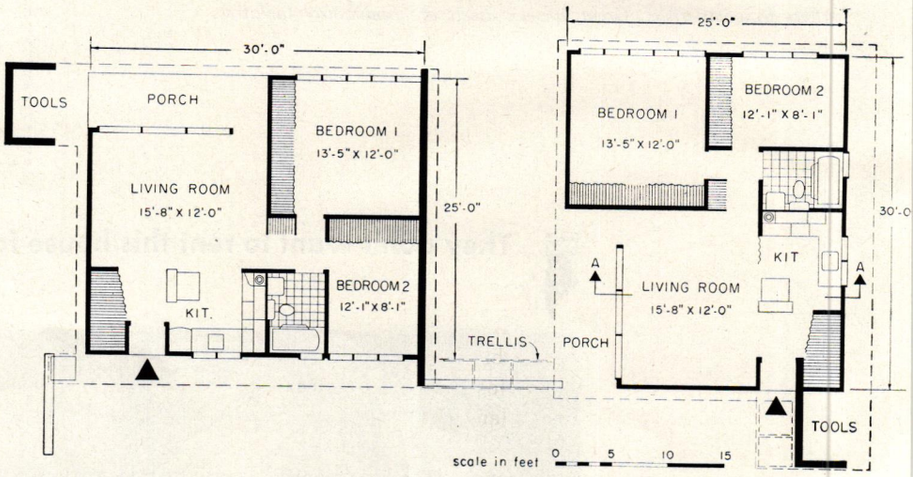


When seen obliquely, as above, the two rental duplex units seem to be a much larger, stretched-out, single house.

From more nearly head on, as below, each flat-top house stands out distinctly. Only connection is grapevine trellis.

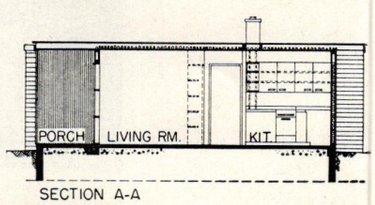




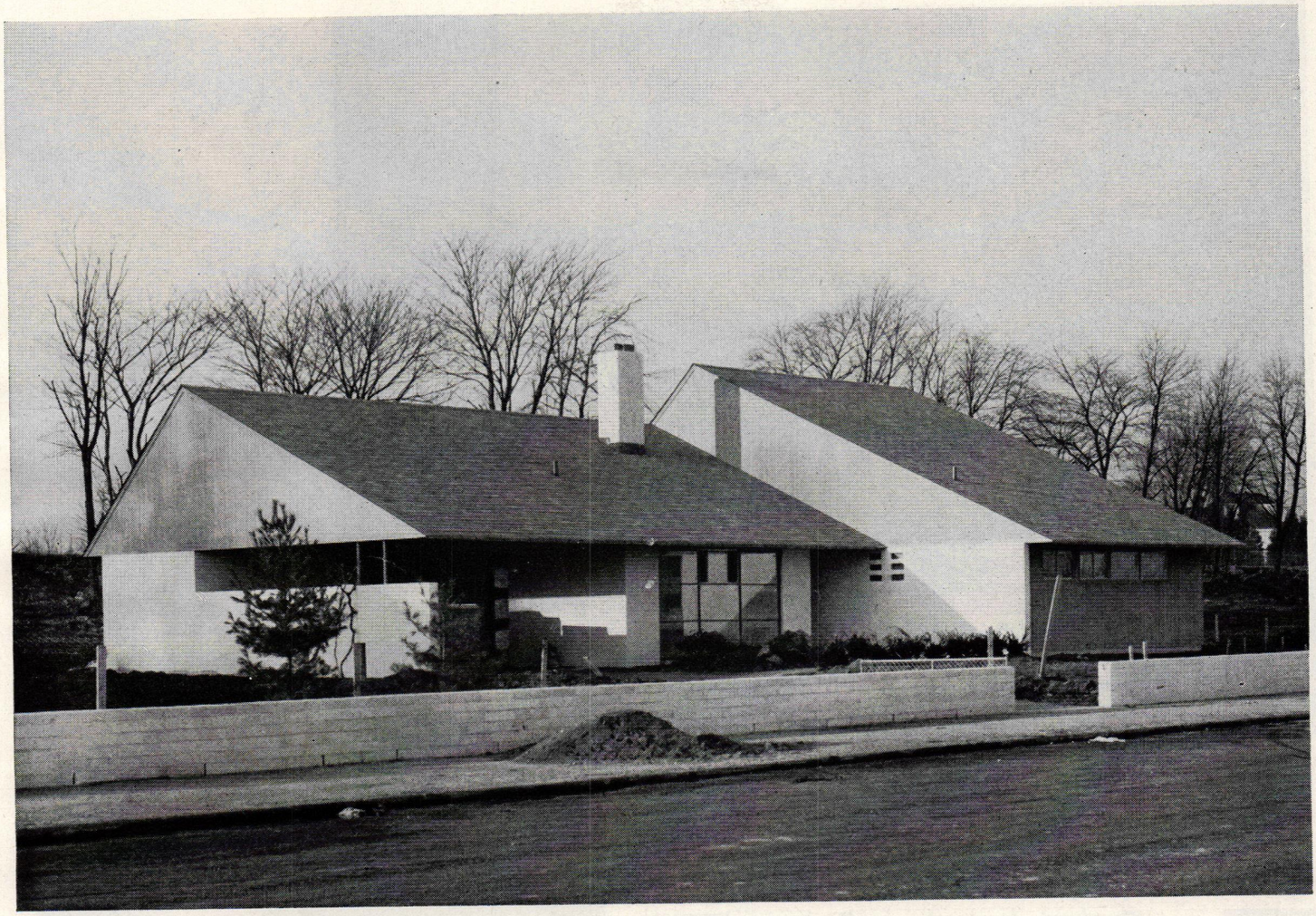


THE BUDGETEER has much in common with the two other new Levitt houses: Exterior wall panels are the same asbestos cement; slab, wall construction and interior painting are the same. But this is the Levitts' first flat roof. Kitchen has stainless steel sink, automatic washer, electric range, refrigerator. Bathroom is equipped like Levittowner. Each unit has 36 sq. ft. of outside storage.

Bill Levitt says his fixed carrying charges on each house are $45 per month and he has to get $20 more for taxes, maintenance and repairs. "If we could net $5 per house we'd be very lucky." He believes these units are less expensive to build than garden apartments and offer a tenant more in privacy and outdoor living than multiunit apartments.



Floor plan shows how one living room faces rear, other faces blank wall of adjoining house. Unit at left not only has rear-facing living room with big windows but covered porch as well. Floor plan is unusually open, with only bamboo screen between kitchen and living room.



THE COUNTRY CLUBBER at $16,990 is as remarkable a bargain at its price as is the Levittowner. Since the 1930's the Levitts have built well over 3,000 houses in this price class and as the latest product in a long series the new house represents the most recent thinking of Alfred Levitt.

Veterans pay $4,950 down, others $5,800 (with monthly carrying charges of $90 or $92) and for this buyers get a choice of six elevations and carport arrangements and the following:

A 12,000 sq. ft. lot (100′ x 120′) landscaped with the largest collection of trees and shrubs a builder ever provided.

Sixteen hundred sq. ft. of enclosed space (plus carport, outside storage) and an efficient floor plan.

Three bedrooms, two baths.

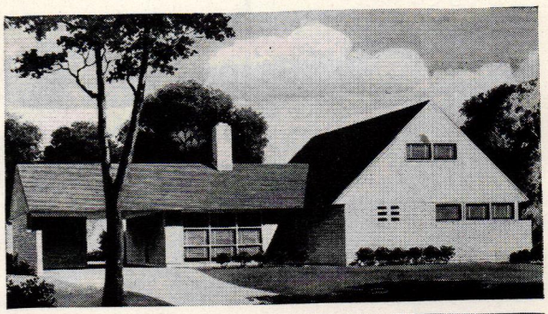
An expandable attic with room for two bedrooms, one bath, extra storage.

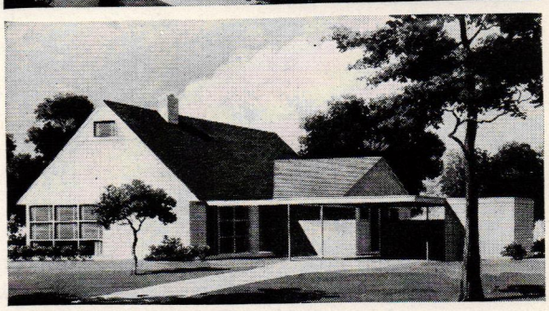
A 14′8″ x 11′3″ kitchen with a nine-pane double glazed window, ample dining space, refrigerator, electric stove, automatic dishwasher, clothes washer, dryer, stainless steel sink and counter tops.

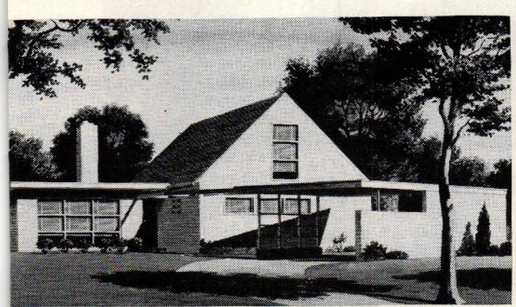
Hot water radiant heat in the slab.

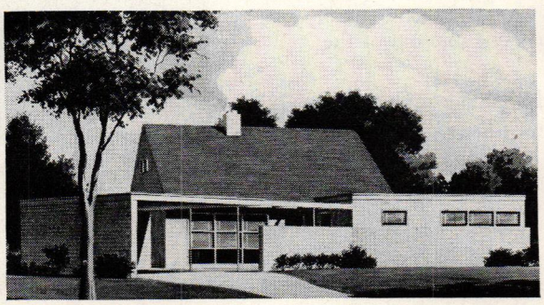
Fireplace, paved terrace, window walls, etc. (see following pages)

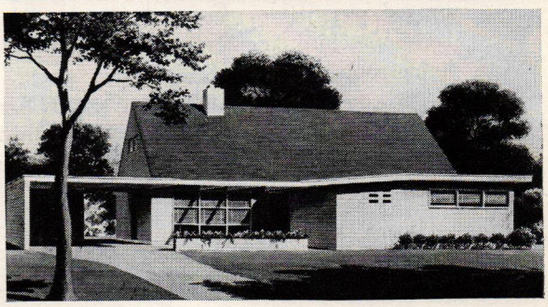
Renderings below show how changes in roof lines and garage location give six distinctive facades.

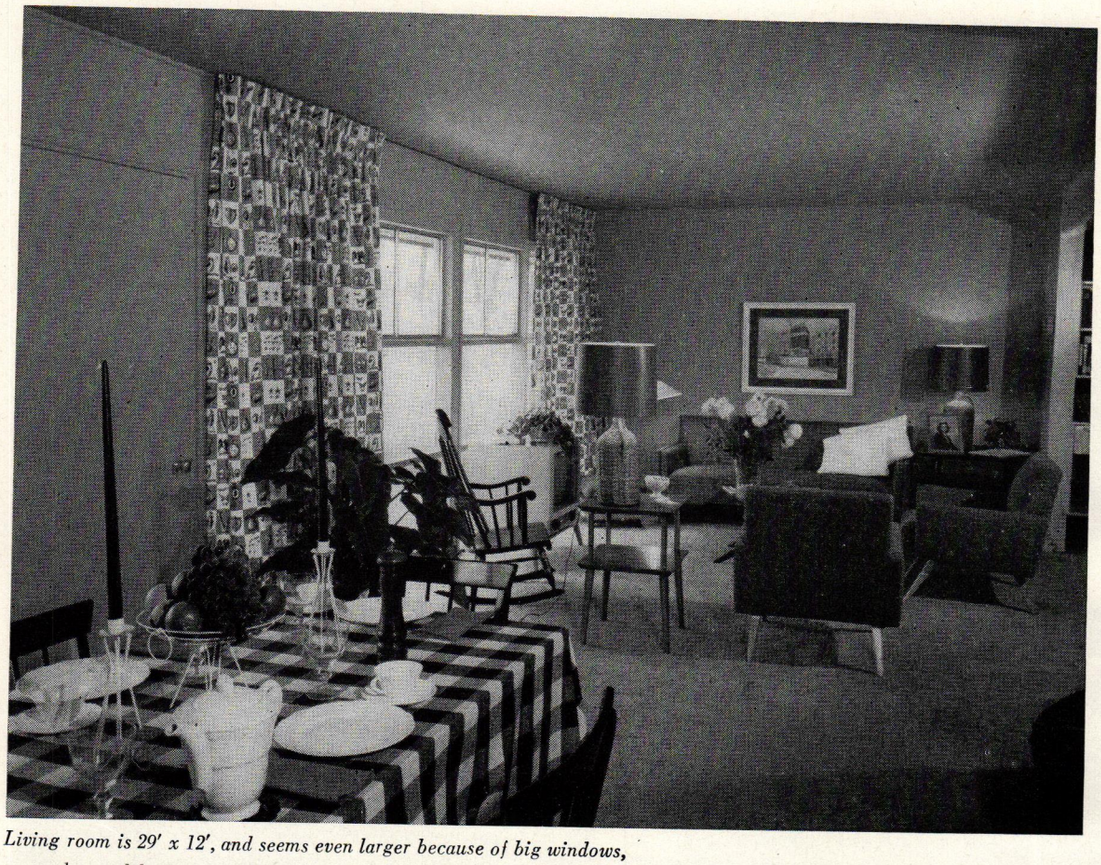




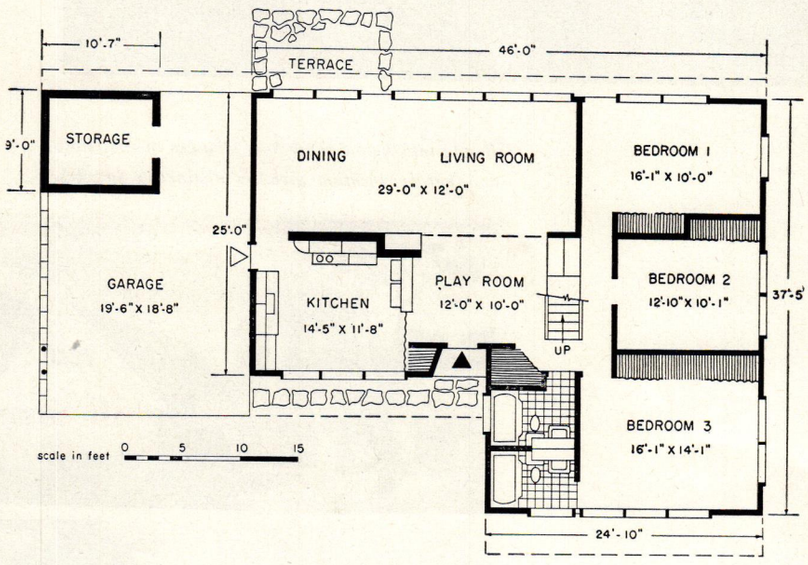


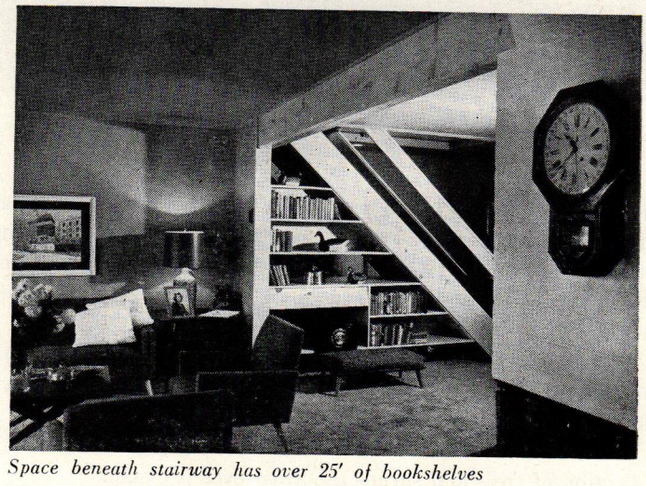




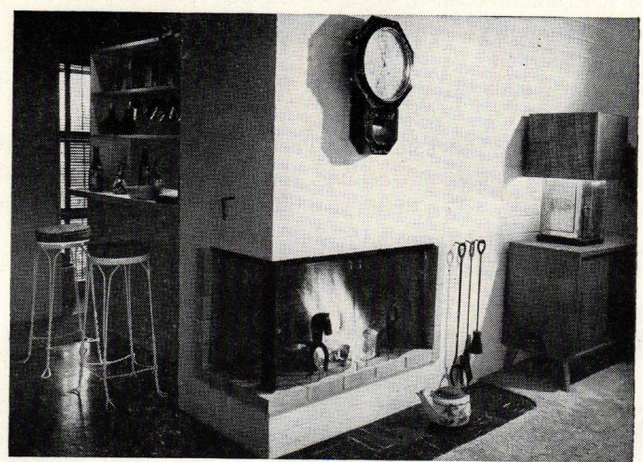


Living room is 29′ x 12′, and seems even larger because of big windows, open plan and large foyer. Door, left, leads to rear terrace.





Space beneath stairway has over 25′ of bookshelves plus useful prefabricated cabinets on both sides.

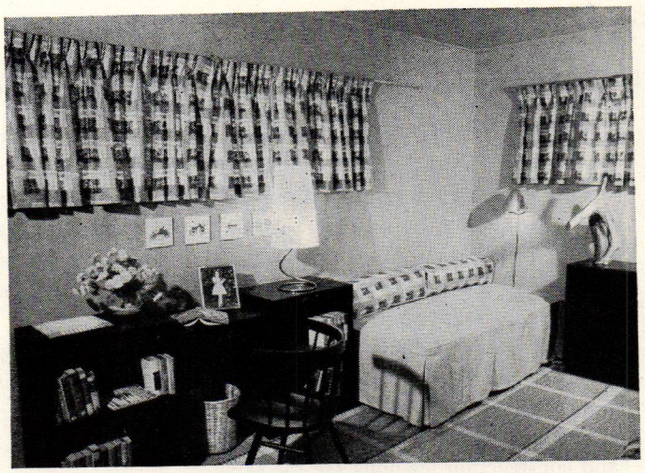


Masonry wall separates living room from kitchen. Mirrored bar, left, is between foyer and kitchen.

$16,990 Country Clubber is best of long series

This new Levitt house is a considerable refinement over the 1949 plan on the opposite page. Alfred Levitt is proudest of the improved circulation. From doors at entrance, kitchen or back bedroom, children can roam through the house but stay out of the living room.

The kitchen is well located for serving food in living room, near porch or terrace, convenient to carport and front door. Children's rooms are fairly isolated from living room and guests in living room cannot look into bedrooms or baths.

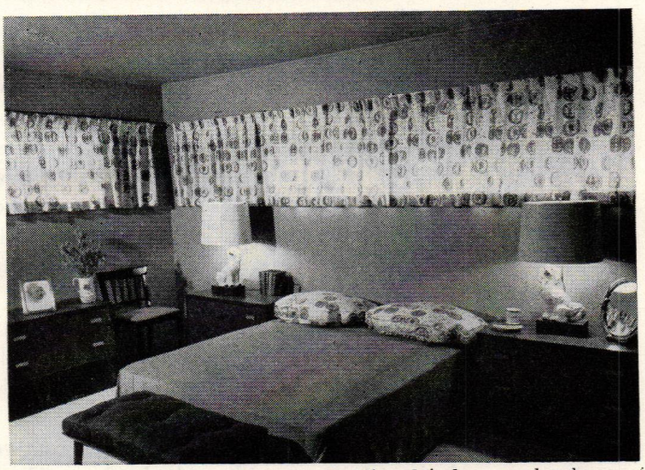


In rear bedroom, left, aluminum windows that slide horizontally make it easy to arrange furniture.

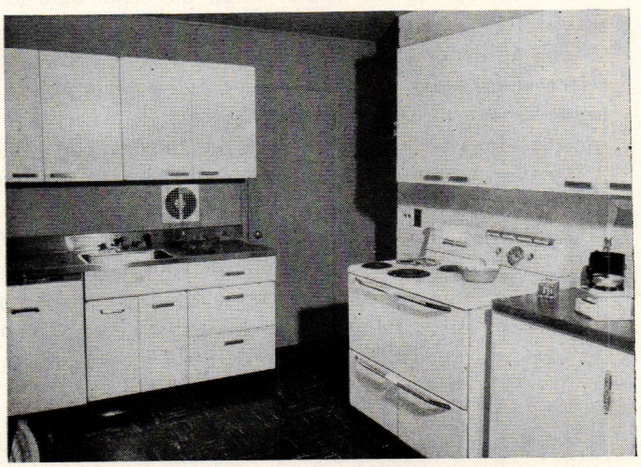
"The foyer has been converted from waste space into something valuable," Alfred Levitt points out. With the small bar it can be used for parties or dancing. Television set, Alfred believes, should be in front of a large window for best visibility. "The TV, not the fireplace, is now the center of the home."

Like the other Levitt houses, the Country Clubber has walls and ceilings sprayed with two coats of a durable, washable paint that is flecked with two color tones. It covers trim, window sills, sliding bamboo closet curtains, closet interiors and other interior surfaces except the stairway and the white masonry wall between living room and kitchen. Seven different exterior colors are used throughout the project but the buyer takes what he finds in the elevation he chooses.

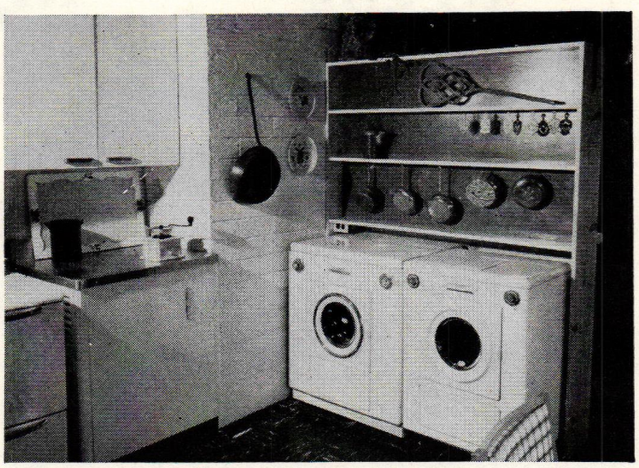
There is unfinished attic space over the entire house which gives a tremendous storage area. If bedrooms and a bath are added later, this is done under the highest portion of the roof which still leaves large unfinished storage space in attics of some models.



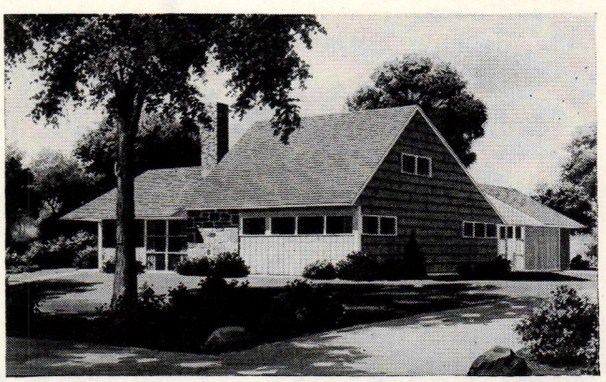
Master bedroom is 16′ x 16′, has an abundance of windows, its own bathroom, large closet.

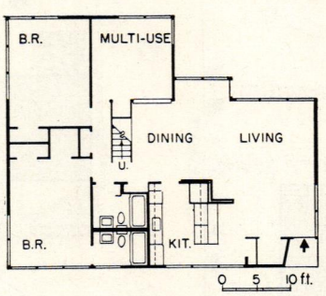


Kitchen is efficiently equipped. Compact furnace, at extreme right above, is size of washer.



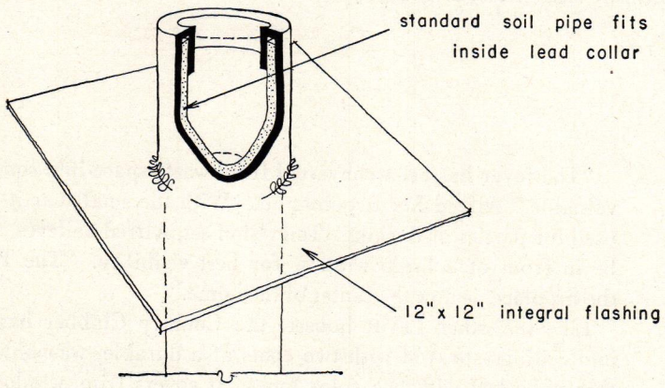
Furnace is in center above; washer, dryer at right



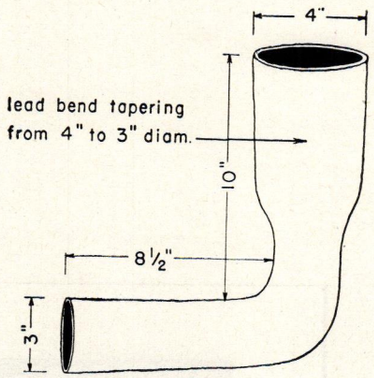


Older Levitt house above is direct antecedent of new Country Clubber, but floor plan (for another 1949 house) shows how Alfred Levitt has improved on circulation. Living room is no longer a runway, present foyer is living space, dining area is more efficient. At the same time best 1949 features have been retained.

Price of large Levitt house made possible by smaller house production



Levitt takes advantage of the shorter vent pipe projection sanctioned under the new national plumbing code to slip a flashing collar over the whole vent, thereby getting a more permanently waterproof job with almost no site labor cost at all. To save critical copper, the collar is made of lead.



In earlier Levitt houses a lead bend below each toilet was made of 4" pipe. Now the lower portion is of 3" pipe, which saves about 4 lbs. of lead per fitting. The famous Jalonack plumbing tree will be used again. For photo see Feb. issue '51.

Every buyer of the Levitts' big house should tip his hat to the $9,990 families. Only mass production of the smaller house makes the low price of the big house possible. Norman Denny, manager of the firm's supply business, says they are buying 6,000 carloads of material this year plus unknown thousands of truckloads. Obviously the 500 big houses get a free ride on the low prices Levitt gets from manufacturers.

About 90% of the materials are interchangeable. Lavatories in the big house bathrooms are slightly larger, and there is extra equipment such as a dishwasher, clothes dryer and a better stove. But floors, walls, windows, heating units, asbestos cement panels and construction methods are the same.

Even though rooms are larger and houses have two stories, workmen used to the small houses will feel at home building the larger ones. Most of the Levitts' subcontractors will move with them to Pennsylvania but there will be many new workmen.

The new location means it is no longer necessary to include a house trap in the plumbing system, and this saves "a few bucks per house." An impregnated fiber sewer pipe runs from the house to the main, and 3" pipe instead of 4" is used for vertical stacks and for part of the waste lines. But Bill Levitt estimates that plumbing costs are little under Long Island's.

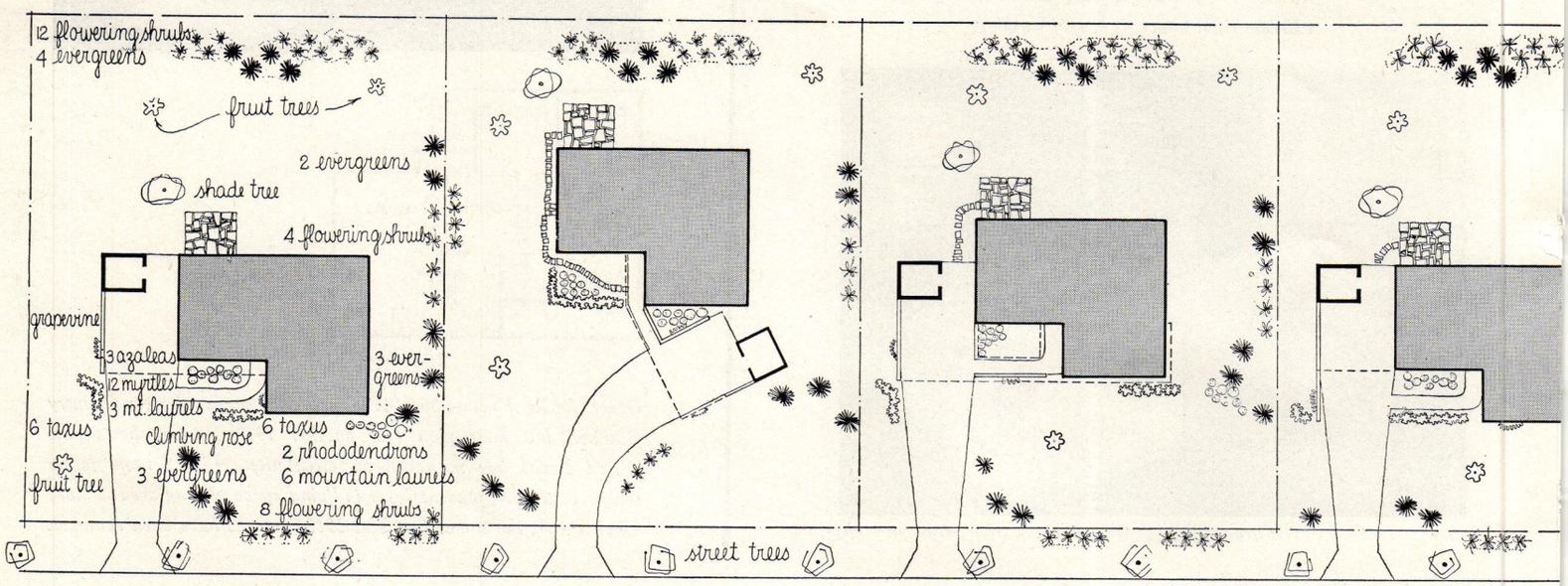
Steel pipe, rather than copper, is used for radiant heat in the slabs. All 16 circuits are brought together in a manifold under the stairway of the Country Clubber, an ideal central location and a control point where the system is balanced.

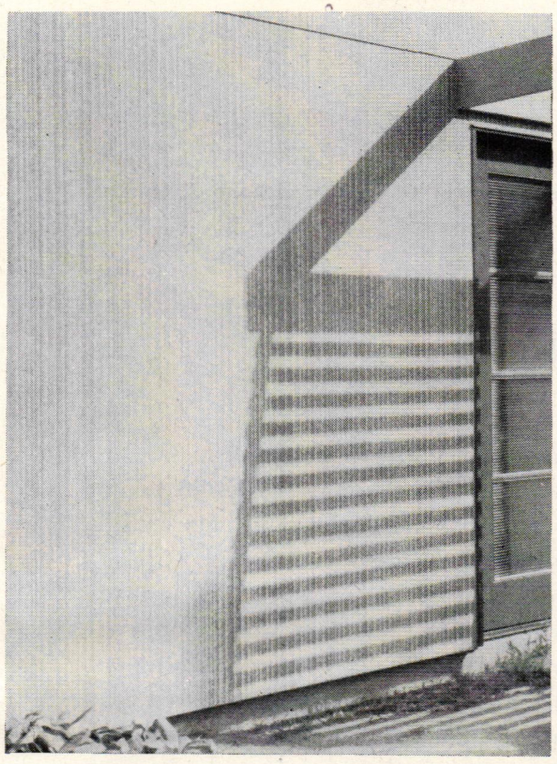
The compact heating unit in the kitchen, result of four years of continuous work, is a point of pride with the firm. The Levitts prodded Jalonack, who prodded and worked with York-Shipley to shave some 14" off the height, 4" off the depth until the heater with all its related parts is only the size of a washing machine.

"The utility room," says Alfred, "is a functionless, expensive device which poor designers need to solve their problem. Our heater is one of the great contributions we have made to the country—for which Irwin Jalonack gets the credit."

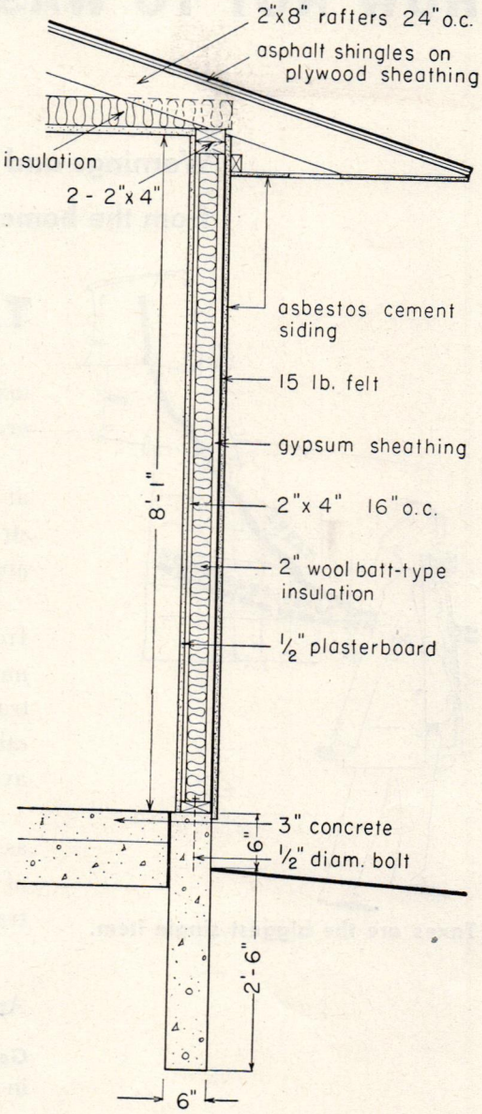
However Alfred also gives some credit to FHA. "We are saving from 15% to 20% of our overhead framing lumber as new FHA rules permit us to put ceiling beams 24" rather than 16" o.c."

The design stages are now complete. During the winter street work and utilities are being pushed as rapidly as weather permits and by early spring houses will be started at a rate of 35 per day, for what will undoubtedly be the Levitts' biggest building year.

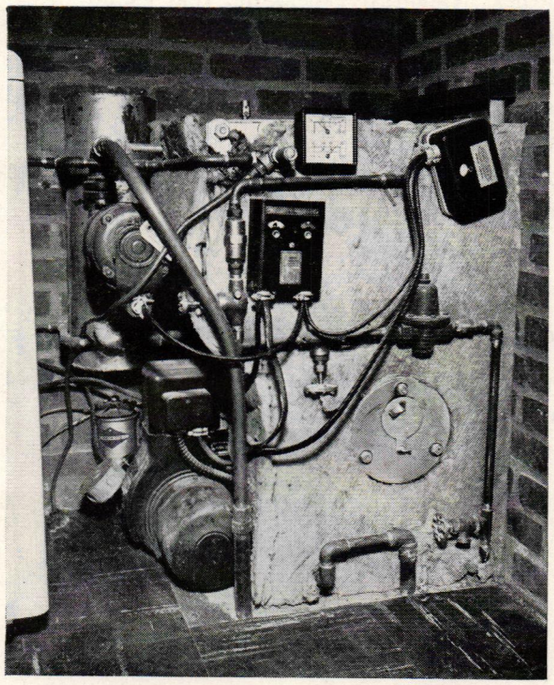




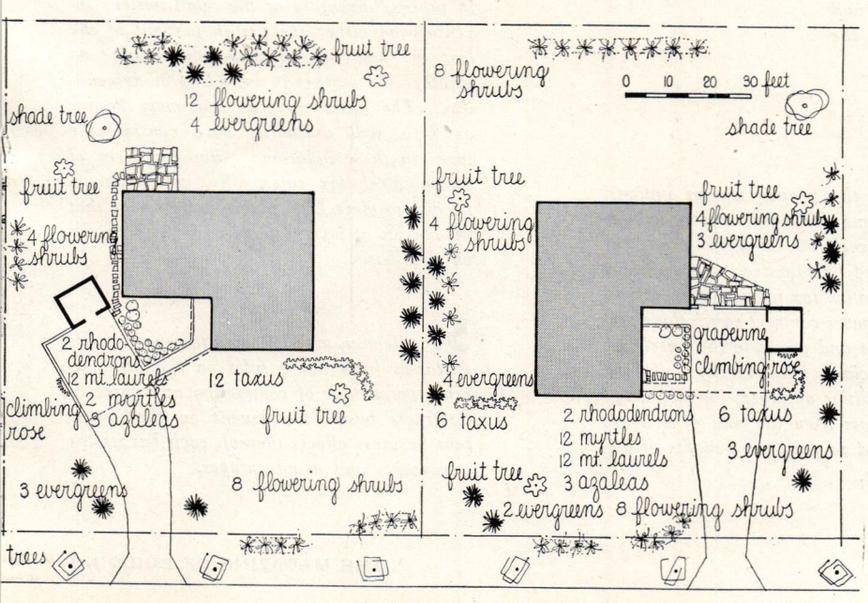
No feature of the new houses interests other builders more than the ⅛" sheets of asbestos cement that form exteriors. Eight feet high x 32" wide, they butt together with an almost invisible crack. Produced in seven colors, vertical lines seem to be striations. At gable ends, top panels lap over bottom panels. Prepunched nail holes speed installation, let carpenters nail through into studs.



Cross-sectional drawing shows that with the exception of Levitt's asbestos cement exterior panel, construction is orthodox. Nailholes in asbestos panels are prepunched and nails are driven directly into studs, giving house more strength than if nails went into a sheathing.



One of the great Levitt contributions to housing technology, this ingenious mechanism is the entire *heating plant. Each year the Levitts have urged Engineer Jalonack to get the heater smaller. Working with producers York-Shipley, Jalonack achieved this model in 1952. Furnace, next to brick wall in kitchen, is size of washing machine, left, 30" high, 25" deep. A stainless steel top can be used as hot plate.*

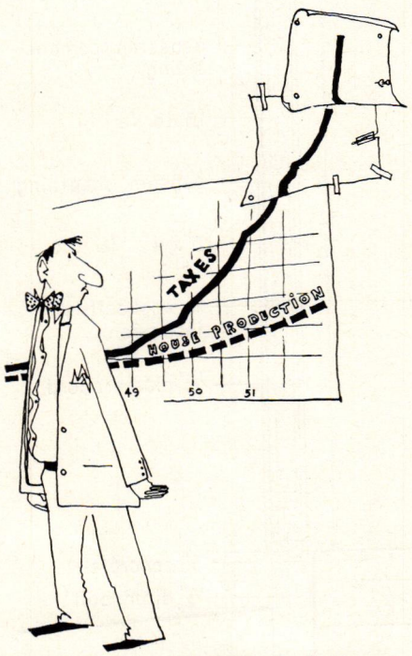


Landscaping plan at left for the Country Clubber houses is one more indication of how the Levitts merchandise their houses as well as example of the extras they give their buyers. These are undoubtedly the most luxuriously landscaped builder's houses on record. Opposite every living room are massed plantings for privacy. Each house gets two and one-half street trees, one shade tree, three fruit, 12 white pine or Norway spruce, 24 flowering shrubs, one climbing rose, one grapevine, 12 taxus cuspidata, 12 mountain laurels, two rhododendrons, three azaleas, 12 myrtles.

HOW NOT TO WASTE MONEY ON TAXES

by Sylvanus G. Felix and John J. Griffin
Attorneys and Tax Counsellors

Warnings and suggestions from the home builders' busiest tax counsels



Taxes are the biggest single item.

Taxes today are the biggest single item in the cost of doing business.

It is absurd to talk of profits before taxes, for there are no profits before taxes and it is pure, unadulterated gobbledygook to deny that tax considerations must influence every major business transaction.

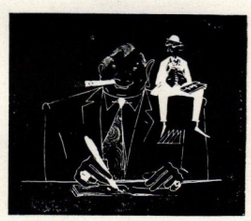
Everywhere in America businessmen must devote too much time to taxes at the expense of other and formerly more important work, and before construction starts the builder will be wise to plan the end result from the tax angle and consider taxes for what they are—cost of production.

Builders' tax problems are distinctive and, for the most part, different from those of other businessmen. One reason is that real estate by its very nature is peculiar in the eyes of the law. Generally speaking, real estate transactions involve interpretations from more branches of the law than any other kind. In no other field are so many tax elections and tax advantages available, some of which will be discussed here.

The precise tax answer to any given set of business facts may be almost as elusive as the cure for cancer, and no single tax pattern will fit the needs of all the nation's home builders, because, like fingerprints, no two business transactions are exactly alike.

And so the best advice of all to give a builder or developer is this:

Get all the help you can from a good real estate tax consultant in your own community before March 15.



THE BUILDER HAS THESE CHOICES

1. *Gains from the sale of houses may be reported at time of sale or spread over two or more years on the installment basis, and certain other gains deferred without the benefit of the installment provision.*

2. *Rather than ordinary income, capital gains may result to a builder from certain sales, depending upon particular elections and alternatives. Gains from sale of property subject to depreciation such as rental units held for investment purposes and not for sale to customers in the ordinary course of business will be taxed as capital gains rates. Owning and operating the properties in a separate entity having no previous real estate sales history could be a most important tax savings election.*

3. *Through the proper use of options, escrows, contracts for deed, etc. a builder may elect to accelerate or defer profits or losses as dictated by practical considerations and the comparative tax rates of the particular years. Whenever contract restrictions prevent vesting title and preclude the purchaser from experiencing substantially all the rights and liabilities of possession of ownership, gain or loss from the sale of a house may be deferred to reap the benefits of different tax rates.*

4. *Where lumber and other building materials are involved, he may report his work in process inventory or the retail outlet's inventory on either the first-in first-out or the last-in first-out method, depending on whether the market is ascending or descending. The latter method, commonly known as Lifo, will ordinarily save considerable taxes in these inflationary times and era of astronomical tax rates. No permission is needed to elect Lifo, nor is it necessary that all classes of inventoriable items be reported on that basis.*

5. *Election may be made to report profits or losses from house sales on the cash, accrual percentage of completion or completed contracts basis. Contingent on the important business effects thereof, each has its tax advantages and disadvantages.*

WHAT BUILDERS SHOULD KNOW ABOUT TAXES

6. *Specific bad debts may be charged off as they become worthless or a reserve for bad debts may be set up if more advantageous. Debts partially worthless may also be deducted without waiting until the entire account is of no value.*

7. *Operations of natural divisions of the business, such as lumber yard, plumbing shop, land development project, home building, etc., may be conducted in the builder's individual name or in multiple entities; that is, in one or more corporations, partnerships or joint ventures, or any combination thereof. Notwithstanding a recent provision of the law which denies certain tax benefits to commonly controlled corporations, builders who for real business purposes elect to operate their separate and distinct businesses in two or more corporations may do so and consequently enjoy the possible tax advantages.*

8. *Before liquidation of his corporation, the builder has an election to sell all the assets of the business or he may sell his stock. The third alternative is to liquidate the corporation and the builder then sell the assets received in liquidation. In the latter two instances the minimum tax will ordinarily be paid, whereas in the first a double take will be received by the Treasury, one of the taxes totally unnecessary.*

9. *Depending upon the time sold in comparison with the purchase date of a new residence and other factors, gain from the sale of an old personal home may be deferred for many years, avoided entirely through death, or reported in the year of sale.*

10. *On the cash basis, individuals have an election to accelerate or defer payments for contributions, interest, taxes, medical expenses and certain business items, the timing of payment being dependent upon their financial ability and the tax picture for the particular year or years. On the accrual basis liabilities may be incurred and fixed in the year desired, and corporations have the election to accrue and deduct contributions in one taxable year if same are paid within two and one-half months after the last day of that year.*

11. *The builder has the election to incorporate his business through the issuance of common stock, or a combination of common and preferred and other stock, and still another alternative wherein notes or bonds are given in return for part of the investment. In the latter case, some of the investor's money may be returned to him tax-free many years earlier than otherwise.*

12. *Increased depreciation on the accelerated declining balance method may be claimed in certain instances, thus resulting in considerable tax savings in these high tax years and during the early life of the rental properties or other assets.*

13. *Certain carrying charges may be expensed or capitalized at the builder's election, again depending on his wishes in the matter. In the case of unimproved and unproductive real property, the owner, instead of deducting them as expenses, may elect to capitalize annual taxes, interest on a mortgage, and other carrying charges. Such an election may be exercised for a given year without regard to the manner in which the same type of item with respect to the same property was treated for a prior year.*

14. *Machinery, automobiles, trucks, etc. may be sold, traded or exchanged, the wrong election causing an immediate tax, the right one deferring the exaction for some years.*

There are certain costly tax actions which permit no election or alternative. As an illustration: accrued salaries, interest, rents and certain other items due and unpaid to the builder and principal stockholder by his corporation may result in the loss of the entire deduction for the year accrued, and it will not be allowed in the year paid. It is of no consequence that the corporation did not intend to avoid any tax or that it was not aware the deduction was not allowable in such circumstances. Similarly, losses on sales between closely related individuals and family corporations and their controlling stockholders will be denied, notwithstanding the *bona fides* of the transaction.

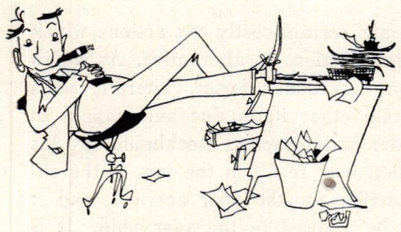
Unsuspecting builders who liquidate their corporation within three years after its organization and before the sale of substantially all of its properties may be penalized by a tax on the proceeds as ordinary dividends rather than capital gains. Moreover, seemingly insignificant changes in stockholdings or nature of the income of a closely held corporation may cause that organization to be penalty surtaxed as a personal holding company. Again, it is immaterial that the directors or stockholders did not know the corporation was subject to the confiscatory personal holding company taxes. In many such instances salt is poured on the wound and a delinquency penalty assessed from the failure to file a personal holding company return.

Legitimate tax savings neglected

All too frequently builders who have no counsel throw away tax dollars by including in their returns nontaxable income or gifts, or report gain from the sale of capital assets as ordinary income. Others fail to deduct medical expenses for drug supplies. Certain casualty losses go begging each year because the builder overlooks the deductible damages caused by the elements.

In the past some individuals penalized themselves by taking the standard deductions on their return, whereas itemized deductions would have been to their advantage. Of course, the reverse may also be true. Sometimes interest on paying taxes and interest buried in installment payments go unclaimed, as well as certain special benefit taxes which are imposed to maintain improvements in an assessment district.

For failure to keep accurate records builders have been known to pay literally thousands of dollars in unnecessary taxes. Perhaps the best example of this statement is that involving the question: Dealer, trader or investor? In the former situation all of the income received from rental property is taxable at 100%, while the gains from the sale of properties by a trader or investor are taxed at the much reduced capital gains rates. Separate books and records for rental and other investment property alone would in many instances have swung the pendulum for the builder and permitted him to report the sale of these assets as long-term capital gain.



Record-keeping saves money

It is common knowledge that poor or no record-keeping has cost builders considerably for unclaimed or disallowed travel, entertainment and promotion expenses. Failure to substantiate these otherwise deductible expenses through adequate receipts and other evidences of payment will militate against any taxpayer. Included in the list of expenses usually estimated and not properly recorded or receipted for: travel, entertainment, promotion, dues, contributions, medical expenses.

SIX WAYS TO REDUCE TAXES

1. *Couching the terms of a lease in such a way that certain receipts become security deposits rather than advance rentals ordinarily will permit immediate tax savings. Deposits clearly earmarked as such, with classification as advance rentals not possible under the circumstances, are not taxable until the year in which the lessor's obligation to repay the amount of the deposit has terminated.*

For example: owner leased a duplex for ten years at a rental of $3,000 per year. The lease agreement provided that tenant was to pay the first year's rent at the time of execution and at the same time an additional $3,000 would be paid to the owner as security deposit for the full performance on the part of the tenant, for damages to the property and for payment of the rent. The security deposit was to be remitted to the tenant if the property was destroyed before the last year of the lease, and provided the tenant had fulfilled certain expressed conditions, the $3,000 deposit was to be applied against the last year's rent. Except in the tenth year when the security deposit is applied as rent, there would not be any additional taxable income to the landlord as the result of this agreement. If the contract were worded so that the deposit could be construed as advance rentals, the owner would be required to report $6,000 as ordinary income in the first year.

2. *Certain rental payments with option to purchase may be a boon or boomerang. Payments received by an owner under a lease agreement giving the tenant an option to purchase the property upon expiration of the lease constitute rents, and not payments for the purchase of the property. However, if under the lease the tenant realizes an equity in the property the payments will represent sale price or rental income, depending upon the facts in each individual case.*

3. *Through rental concessions a lessee may be encouraged to install improvements on the lessor's property. The value of such additions ordinarily will not result in any tax to the lessor at the time of installation or the reversion of the property to the lessor. For instance: owner leased a business building for 20 years at a rental of $10,000 per year. In addition, the agreement provided that the tenant would pay for the erection of an adjoining building on the leased premises at a cost of $5,000 and that such improvements would revert to the landlord when the lease expired or on the date of forfeiture, whichever first occurred. At the time of the erection, or at the end of the term of the lease or in the year the tenant forfeits, the owner would not have to report as income any part of the $5,000 or any other value as the result of the acquisition of the new building.*

4. *Lease bonuses paid by a lessor to a lessee, or vice versa, have certain beneficial tax effects depending upon the timing and method employed in making the payments. Whenever a bonus or other income is received by the owner from a tenant in consideration of granting the lease, the amount of the bonus is, in effect, a supplement to the rent already determined and ordinarily must be included in the owner's gross income for the year in which received. On the other hand, if the disposition, use or enjoyment of the advance payments is restricted and no valid legal right to the receipts arises until some future date, payments will not be taxable until all events have occurred which determine that income is the property of the taxpayer.*

Commissions, fees, bonuses or other costs paid in order to acquire a lease or to obtain possession of business property under a lease, covering a period of more than a year, generally must be capitalized, and, instead of being entirely written off against income in the year paid, are deductible only on a pro-rata basis over the life of a lease, regardless of the accounting method used by the lessee in reporting income.

5. *Restoration of rental property by the lessee prior to lease termination may be of practical benefit and a tax expedient.*

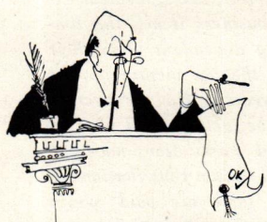
6. *Deductions for repairs will be allowed when such items are properly classified and accounted for; otherwise nondeductible capital expenditures may result.*

THREE THINGS TO AVOID

1. *Paying a debt with property which has increased in value may lead to a decided tax disadvantage, and satisfying another obligation with depreciated property could also result in a heavy additional tax.*

2. *Perhaps the uninitiated have also been guilty of this error: through the failure to allocate values to various assets at the time a business is sold some of the properties may not receive the preferential capital gain treatment with the entire proceeds being unnecessarily taxed as ordinary income.*

3. *There is also another costly transaction in taxes: the one wherein a business is incorporated at the time that most of the profits are planned to be paid immediately to the stockholders. This results in a double tax, one on the company's profits and again on the individual's on the dividends which are not deductible by the corporation. The corollary to this transaction is the one where an individual business or partnership is not incorporated, when the individual taxes are prohibitively high, and most of the profits are to be retained in the business for good business purposes.*



It's not a crime to avoid taxes

To set everyone's mind at ease about the difference between tax avoidance and tax evasion let us see what Judge Learned Hand, one of the great appellate judges of all times, in the case of *Commissioner of Internal Revenue* v. *Newman (1937)* has to say:

"Over and over again courts have said that there is nothing sinister in so arranging one's affairs as to keep taxes as low as possible. Everybody does so, rich or poor, and all do right, for nobody owes any public duty to pay more than the law demands; taxes are enforced exactions, not voluntary contributions. To demand more in the name of morals is mere cant."



Photos: Joseph O. Fadler

Ben Hur Estates is a hillside tract of 31 acres in Los Angeles, bulldozed into 81 level building lots separated by terraces and retaining walls. Photo above is a typical front yard view.

PRIZE SUBDIVISION

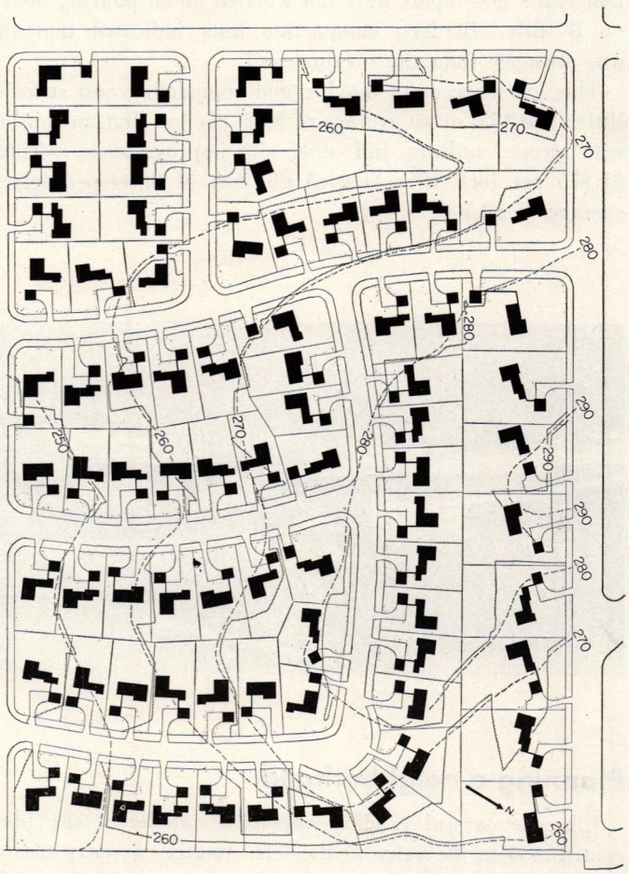
Built on terraced lots —a triumph of earth-moving equipment over an "impossible" site

This terraced development on a California hillside is a triumph of the bulldozer and the road builder's soil-compacting sheepfoot. Every foot of the 31-acre tract had to be cut or filled — the slabs for many houses were poured on 8′ of compacted fill. But the result was so successful that Ben Hur Estates, a subdivision in the $14,000-$17,500 bracket, won one of the five top awards in NAHB's fourth annual Neighborhood Development Contest. *

All the 81 building sites are level, though grades are such that many lots are flanked by terraces up to 8′ high.

Judges of the contest were Land Planner Seward Mott, former director of the Urban Land Institute, Architect Walter K. Durham and Chief Byron R. Hanke of FHA's Land Planning Section. In addition to praising Ben Hur's site planning, this jury commended the design of The Ben Hur houses:

- "Architecturally—a very good example of contemporary design.
- "Particularly commendable is the treatment of garages which are detached but are connected architecturally.
- "Planning for outdoor living was excellently handled.
- "An interesting use of exterior materials and variations.
- "A good example of a flat-roof house which could be easily adapted to use for almost any section of the country.
- "Floor plans incorporate all the good points brought out in the NAHB-FORUM House Design Competition (Mar. issue '51) such as good interior circulation, no waste space, no useless dark halls, and separation of the bedroom from the family living area."



* The four other awards (all of equal merit) went to: 1) "Park Forest," Chicago, Ill. Builders: American Community Builders, Inc. Architects: Loebl, Schlossman & Bennett; Kincaid & Hutchinson. Planning Consultant: Elbert Peets. Engineers: Consoer, Townsend & Associates. 2) "Wedgwood," Seattle, Wash. Builder: Albert Balch. Architects: Thomas, Grainger & Barr; Chiarelli & Kirk. 3) "Tanglewood," Houston, Texas. Builder: William G. Farrington. Architects: Phillip C. Willard, Wylie W. Vale. 4) "Park Lawn," Columbus, Ohio. Builder: Todd Tibbals. Architects: Tibbals, Crumley & Musson.

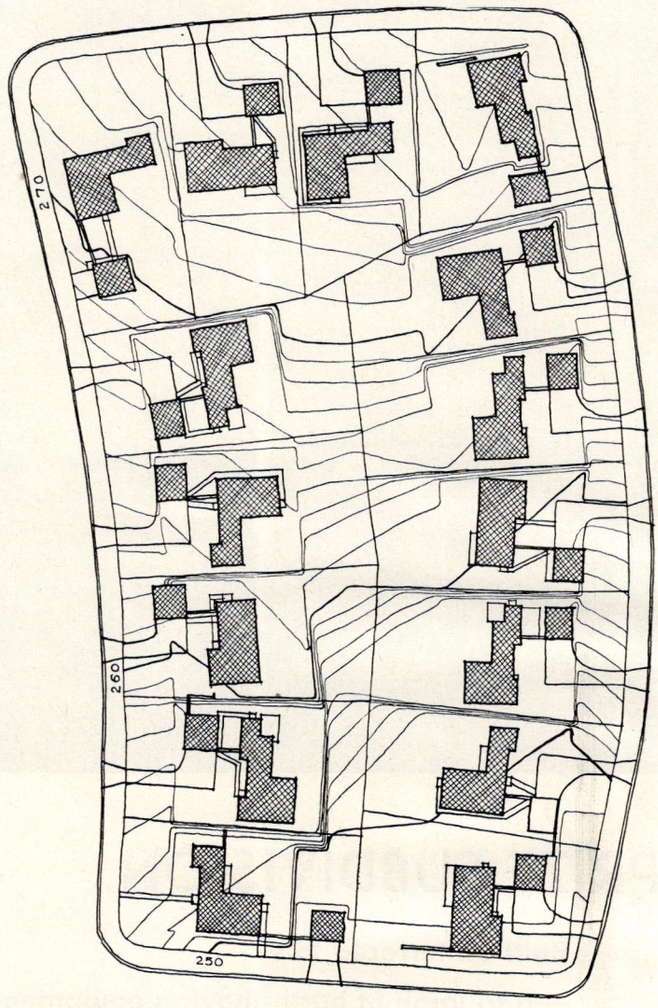
Moving a mountain

Never considered a good development site because of the 40′ drop in its 1,000′ width and because of its many gullies, the Ben Hur tract was available at $3,000 an acre or about $1,150 per lot—bargain prices in this part of suburban Los Angeles. Its possibilities could be appreciated only by those who, like Ben Hur's land planners, were familiar with the abilities of modern earth-moving equipment.

First, the land planners remodeled the terrain on paper, then called in the bulldozers. Instead of shoving the earth big distances to form a few big shelves for level rows of houses, the bulldozers lopped off the high spots, filled in the gullies and then transformed each building site into a level platform with terraces in between. (Along many lot lines the terraces were replaced by concrete block retaining walls four to six courses out of the ground.) Thus the general configuration of the terrain was preserved, bulldozing costs were minimized and each lot was raised about its neighbor so that it could better enjoy the view and the breeze.

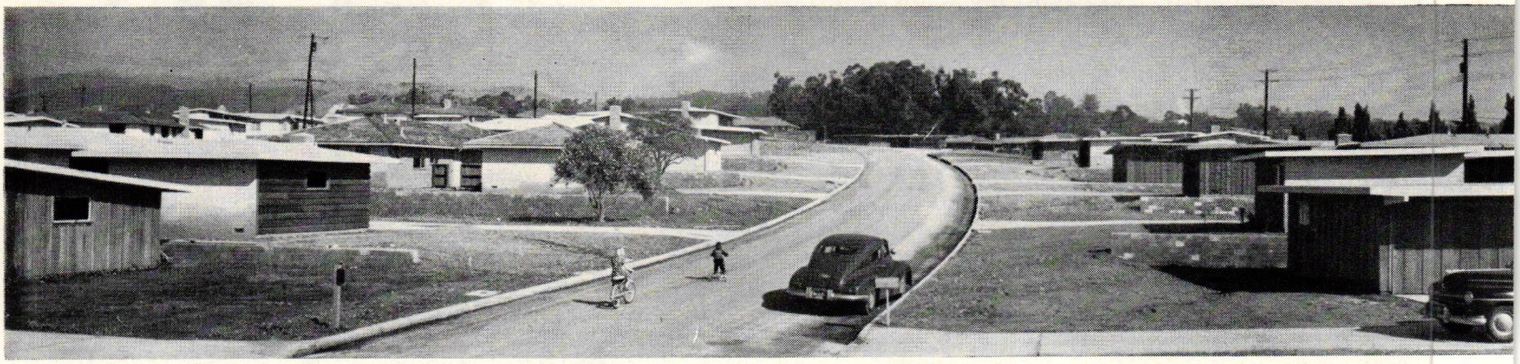
Next came the sheepfoot—a huge spiked roller used extensively in compacting highway fills. At Ben Hur each 6″ of dry fill was rolled with the sheepfoot and rolled again after it had been thoroughly soaked. This operation was repeated after each 6″ of fill was placed. In some low spots a 15′ fill was required but 8′ was the most required on any actual building site. Since road builders have successfully placed highways on 30′ fills, Ben Hur's developers were not worried about pouring floor slabs on 8′ fills. In fact, compaction tests indicated that the fill was stronger than the original soil.

This extensive earth moving and compacting cost surprisingly little: $30,375, or an average of $375 per lot. But, in conjunction with streets, utilities and other site improvements ($94,625 or $1,175 per lot), they boosted the cost of developed lots to an average of $2,700.



Typical block plan with 1′ contours shows how level lots were terraced into the hillside. Note how contour lines gang up along lot lines, indicating the location of steep terraces and retaining walls.

Built of concrete block, the retaining walls are shown in this street scene



Planning a neighborhood

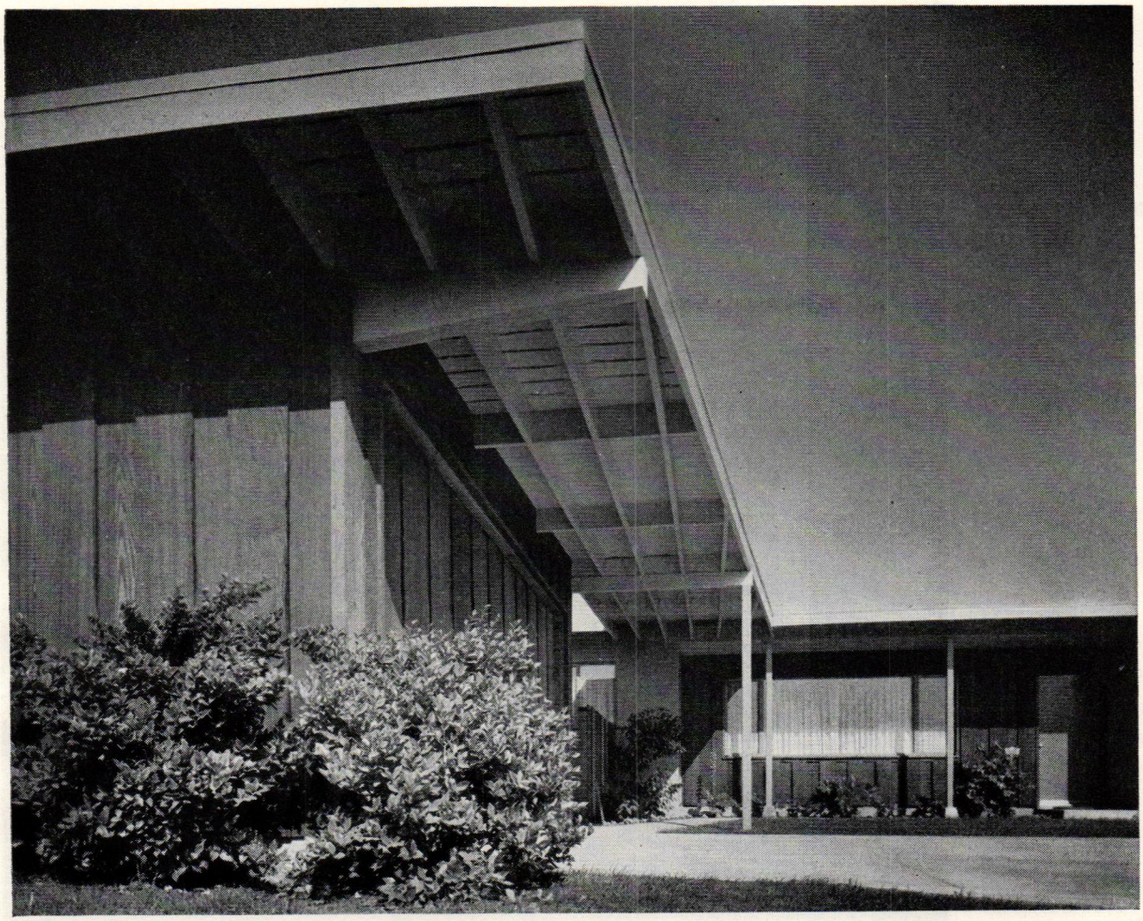
Like the careful grading operation, intelligent site planning contributed to the value of the lots. Gently curved streets added interest to the development and were in keeping with the character of the terrain. More important, the lots were made comfortably large. The smallest is 70′ wide and contains 10,000 sq. ft.; many are 120′ wide and about 12% contain as much as 20,000 sq. ft.

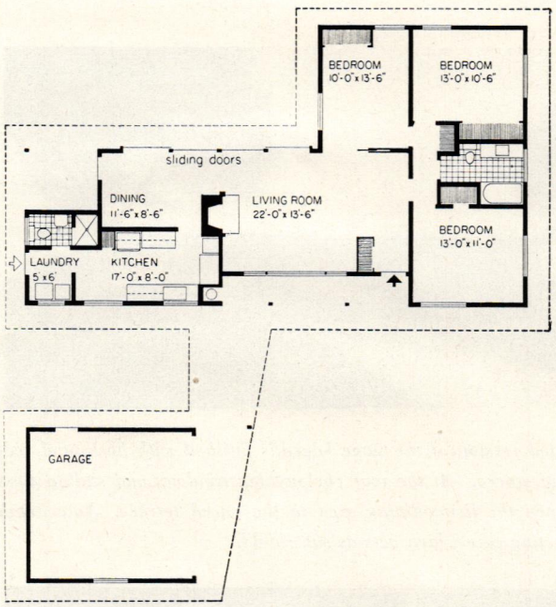
Privacy between lots is provided by terraces and retaining walls along the lot lines and, in some instances, by board fences erected by the builders and designed by the architects.

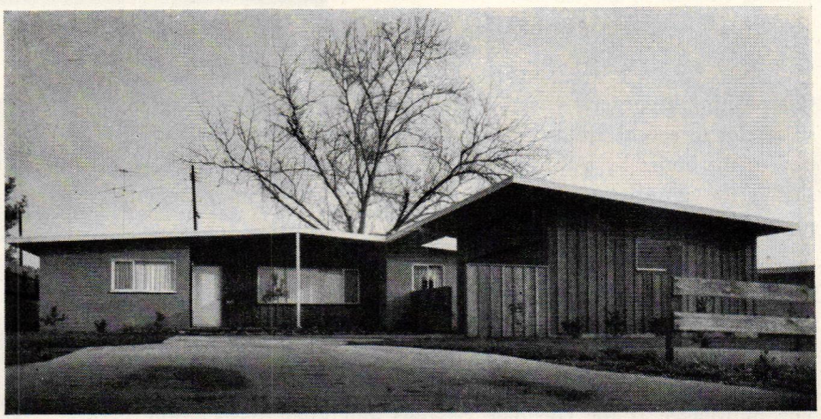
Designing a house

Generous lot widths made ample room for the rambling one-story houses which Architects Burge & Roach designed for the tract. Three basic house models were produced, all about the same in size (1,250 to 1,275 gross sq. ft. excluding garages and porches) and cost, but priced between $14,000 and $17,500, depending largely on location and lot size.

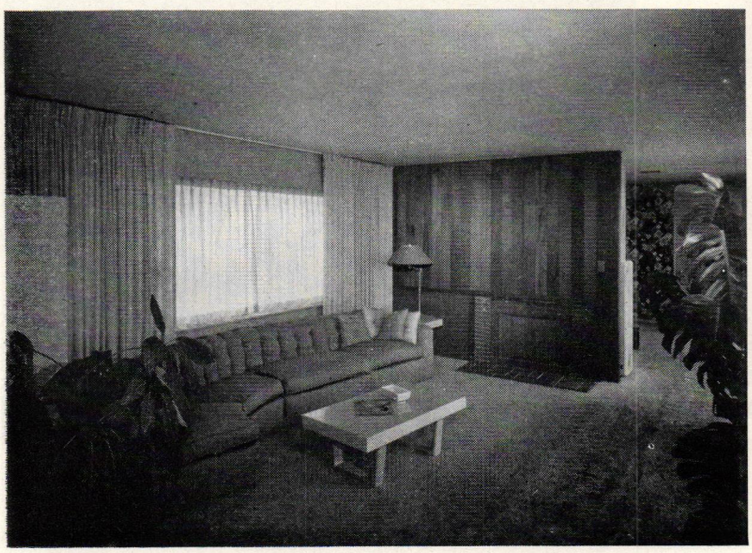
While most lots would have accommodated attached garages, the architects decided against them. By detaching the garages and placing them to the front of the houses, a more easily varied, more interesting street appearance was created. Moreover, in

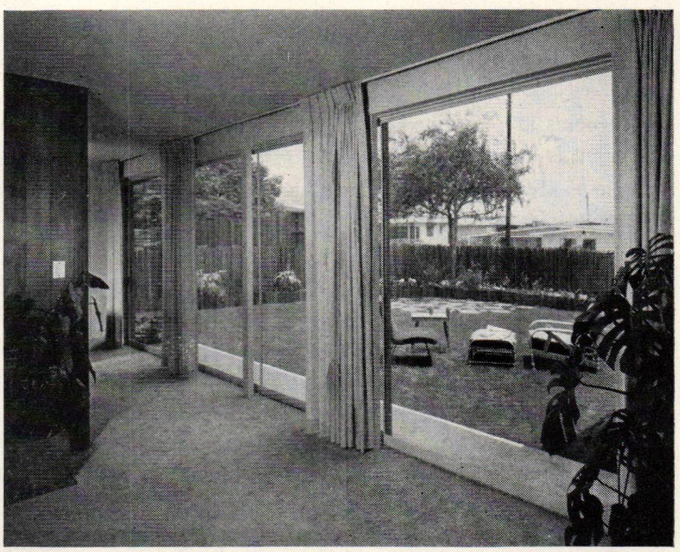




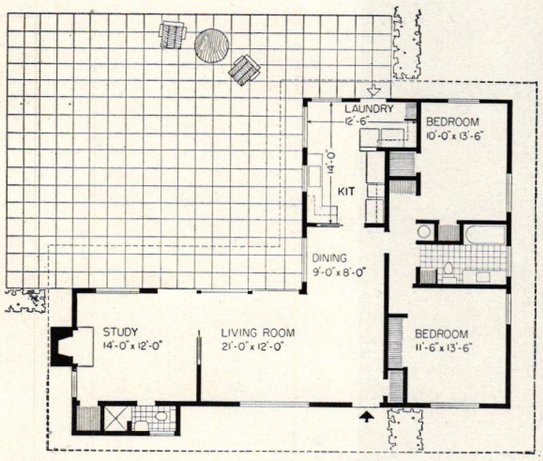


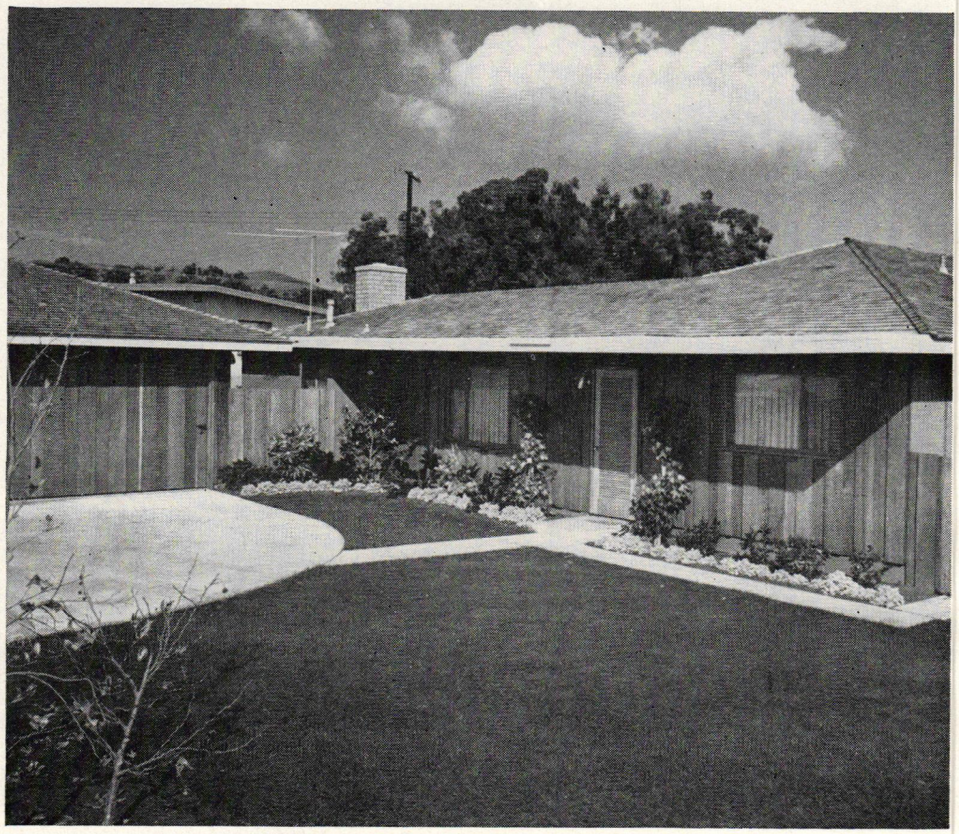
Detached garages in front yards are tied to these three-bedroom houses with roof extensions which serve as protection for entrance walks. Photos above show how variety was achieved by reversing the floor plan.





Living room views illustrate the houses' open plan and simple detailing.





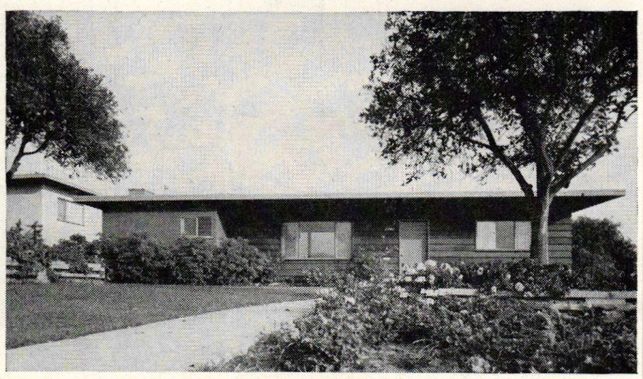
Most popular house has an L-shaped plan. The 12′ x 14′ study off the living room, thanks to its private bathroom and folding partition, is readily convertible into a third bedroom or guest room. Facade of this model is finished in vertical redwood boards which are also used for the fence and the screen which ties the house and garage together. Other walls are stuccoed. All house prices begin at about $14,000, range up to $17,500 depending on location and lot size.

this position a garage's yawning front could be turned to one side so as not to reveal all its contents to every passer-by. Skillfully tied to the house by a roof extension which is frequently used to shelter the entrance walk, the garage seems to become an actual part of the house.

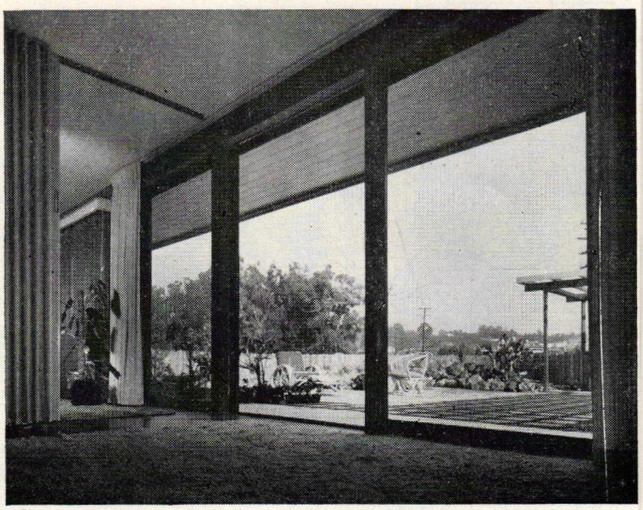
As shown by the accompanying plans and pictures, the Burge & Roach designs are contemporary inside and out. They were readily accepted by the local FHA which agreed to insure the mortgages on the $14,000 houses up to the legal maximum of $10,500 under Regulation X ($11,300 on the $17,500 model). The mortgagee is the Glendale Savings and Loan Association.

Among the best details are these:

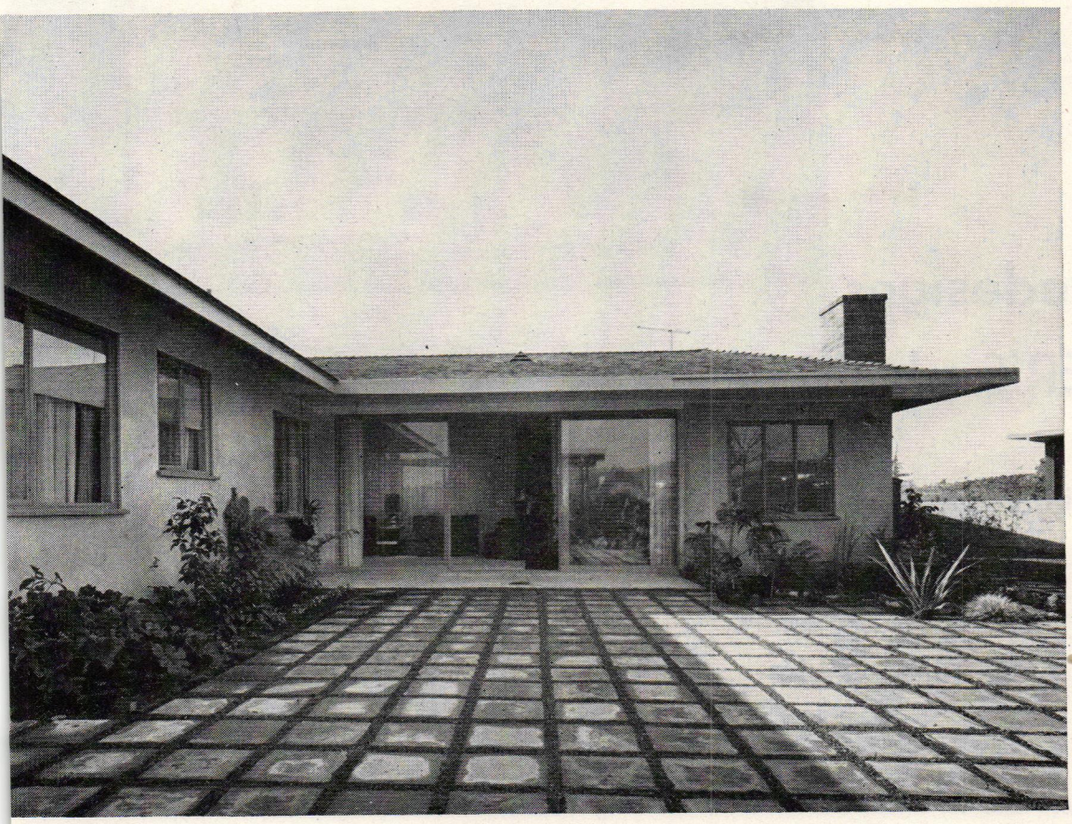
- Living-dining areas are opened up to the big back yards through large windows and sliding glass doors. This feature has proved to be the houses' biggest selling point.
- All windows are large—even those in the front of the house—and they are well protected from the sun by large roof overhang (*see photo, right*).
- Bathrooms are equipped with counter-type lavatories. A second bathroom is also provided—usually adjacent to the service area.
- Kitchens are big enough to accommodate a dining table and have a separate alcove for laundry equipment.
- Handsome outside treatment includes low-pitched (2 on 12) roofs, simple detailing and skillful use of various exterior finishing materials. The rear and sides of each house are stucco. To give neighboring houses a variety of texture, the fronts are finished with redwood in three patterns—board-and-batten, board-and-board, and horizontal siding—in combination with stucco.
- Street front variety is enhanced by an imaginative use of color. Consisting of complementary colors of like value, the Ben Hur palette helps disguise the fact that only three basic houses are used and, at the same time, ties the houses together visually in a harmonious color pattern.



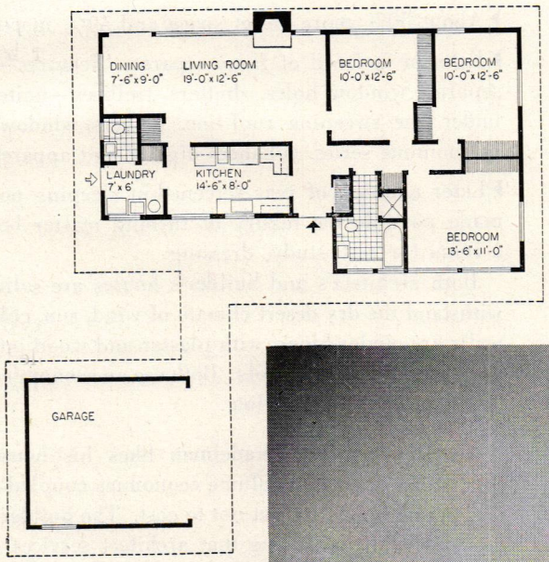
Flat-roofed version of the same house is finished with horizontal redwood and stucco. At the rear (below) big windows and sliding glass doors open the living-dining area to the paved terrace. Note depth of projecting eave which acts as sun shield.



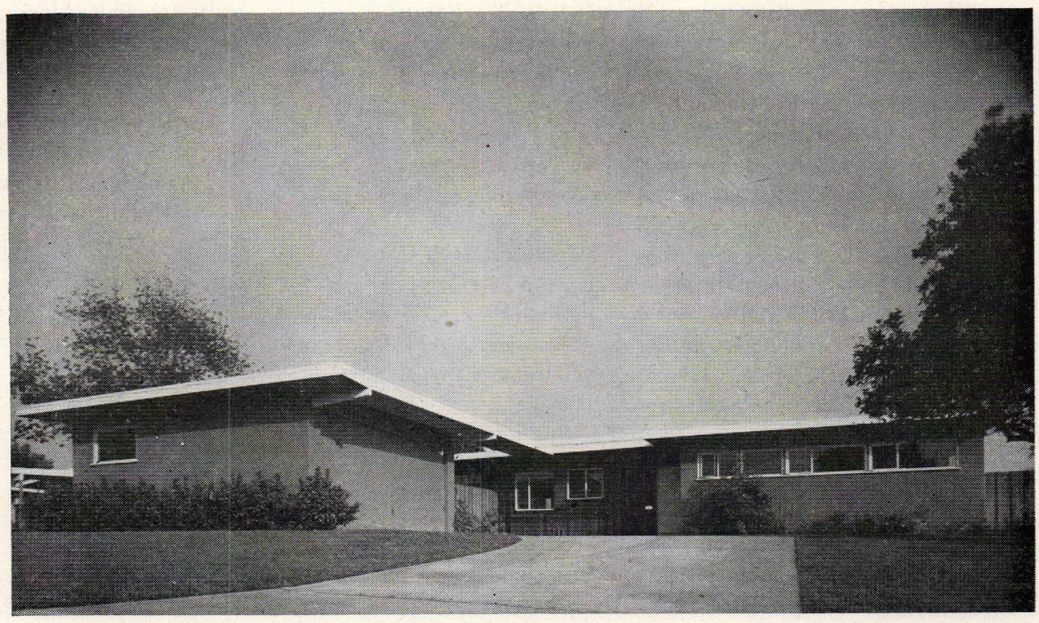
LOCATION: Whittier, Calif.
KENBO CORP., Builders
BURGE & ROACH, Architects
WILLIAM H. FAIR and BURGE & ROACH, Land Planners



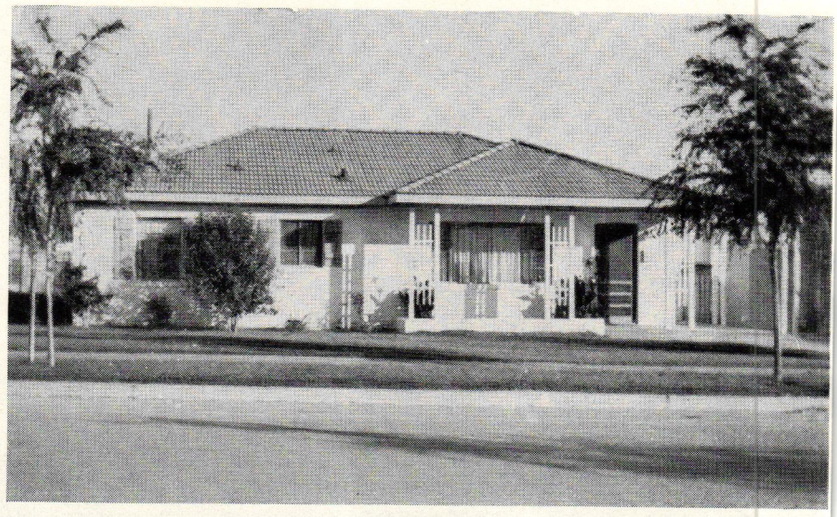
Paved terrace at rear of L-shaped house becomes part of living room when large glass doors are opened. While this roof is hipped and shingled, others are gabled or flat and topped with pastel colored stone.



Most compact of three basic houses (below) features open living-dining space, private vestibule, large bathroom with counter-type lavatory and separate shower, a second bathroom off the laundry. High windows give privacy to the front of the house, contrast sharply with the living room's rear wall of glass. Note how detached garage in front is integrated with the house's straightforward design. This makes the whole appear larger and, at little expense, adds interest to the facade, gives it the quality of a big, expensive, rambling L-shaped plan.

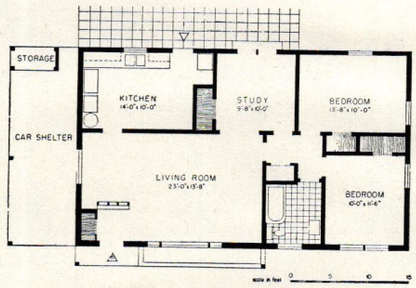


ARCHITECT redesigns BUILDER'S plan



Builder's house is fussy with roof jogs, trellises, cut-up windows, shutters

Result: a better house with the same money and materials



LOCATION: Las Vegas, Nevada
RICHARD R. STADELMAN, Architect
TEE CONSTRUCTION CO., Builders

The only difference between these next door houses is that one is an architect's house. The other is not.

Both are the same size. Both used the same materials. Both cost about the same amount. Both were built by the same builder, on the same 47-house tract, with the same crews and the same volume-building economies.

"I set out to see what an architect could do to improve a builder's stock plan—within the same limitations of size, price, materials, location. Result: professional planning plus $143 in extras paid off in better layout, cleaner design, easier housekeeping (50% more closet space, much built-in furniture), more living space." So says Architect Richard Stadelman of his own 1,150 sq. ft. house.

The story began when Stadelman went about getting his house by very direct route. He asked the Tee Construction Co., then building a tract of houses in Las Vegas, if he could buy their stock plan and make a try at re-designing it to suit himself. The builder was willing, costs turned out to be about the same, a standard contract was signed (house and lot, $11,500), and work started. Now standing side by side in the development, architect's and builder's houses are ready for comparison.

While the builder likes the sales appeal of such features as his larger kitchen ("people out here like to eat breakfast in the kitchen") and his den opening onto the back terrace, he liked the architect's sliding door between the children's rooms and the larger glass areas well enough to put them in some of his new houses now abuilding.

The architect considers his house more livable ("granted, I designed it for myself—not everyone, for example, has a housing problem for some 56 record albums"), points out:

- Built-in furniture makes small rooms seem larger and maidless housekeeping easier, and was a good $143 worth; only furnishings needed were 4 beds, 10 chairs, 3 tables.
- The 3-way bathroom is "a splendid affair for parents, 2 children and the morning rush."
- Living room goes through, opens east and west (at west is terrace). Galley-type kitchen makes way for separate dining space. Two-section sliding door opens children's bedrooms into one 24′ playroom.
- About 50% more closet space and 50% more glass area.
- Exterior is freed of fussy separate "features"—roof jogs, separate window holes, shutters, trellises—unites the house under one sweeping roof-line, gathers windows into long harmonious series, enhances dignity and apparent size.
- Later addition of rear screened-in sleeping porch ($300) made possible the luxury of turning master bedroom into a room for rest, study, dressing.

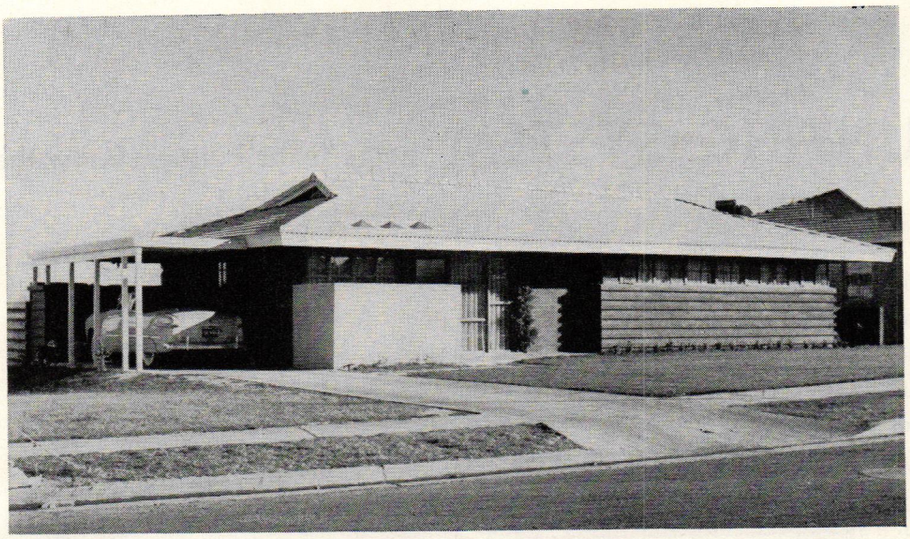
Both architect's and builder's houses are solidly built to withstand the dry desert climate of wind, sun, cold. Exterior walls are cinder block, with plaster and wood interior walls, hardwood floors, tile roofs. Both use an economical rectangular plan, on 60′ x 150′ lots.

Happy ending: Stadelman likes his house fine, has proved his point that volume economies coupled to architect design add to quality but not to cost. The builder, influenced by Stadelman, is finding that architect services on his new tract are "making the job better and easier."

COST BREAKDOWN

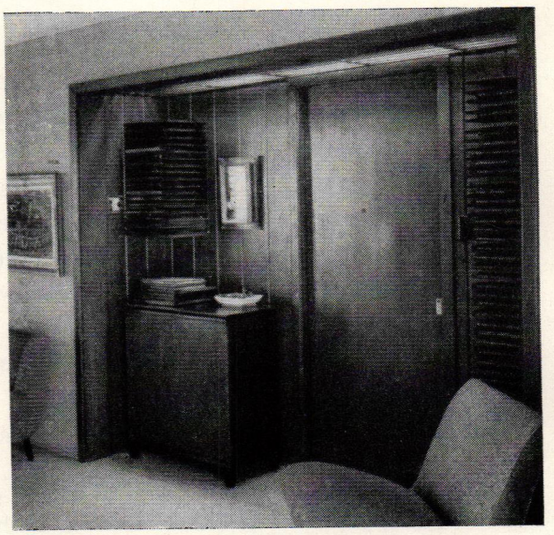
Land, improvements	$1,430	Plumbing	790
Masonry	1,655	Heating	315
Carpenter labor	850	Painting	450
Lumber	630	Landscaping	150
Doors, windows, etc.	513	Taxes and interest	130
Millwork incl. labor	550	Misc. (plans, surveys, site clearing, etc.)	274
Flooring	390	Overhead and profit	1,000
Roofing	310		
Hardware	125	TOTAL	$11,512
Plastering	850		
Insulation	160		
Sheet metal	220		
Tile work	160		
Wiring and fixtures	560		

(Actual selling price was $11,500, same as that of other houses in tract, plus $143 Stadelman spent for built-ins.)

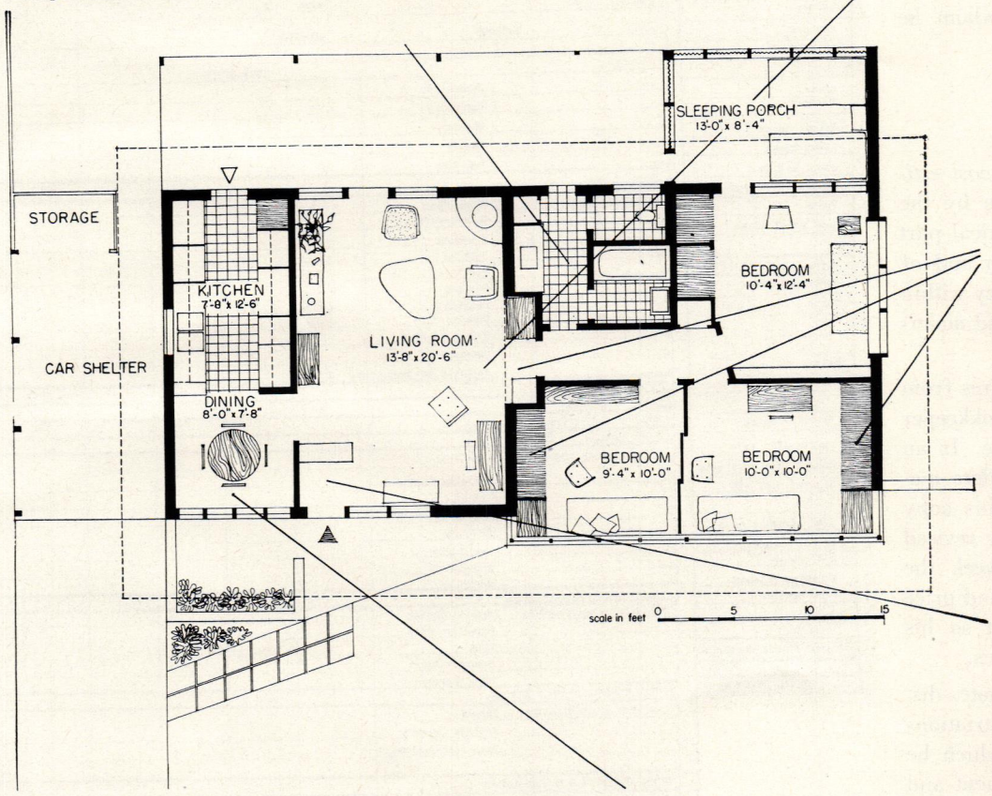


Architect's house is simple, dignified, private; has one sweeping roof-line

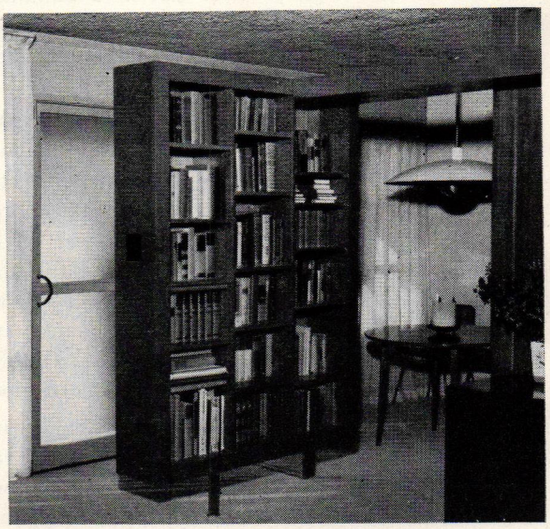
Three-way bathroom is subdivided into 1) lavatory and tub with shower; 2) powder room-lavatory; 3) toilet, which may be conveniently reached by children from outside rear door. Powder room's wash basin is neatly set into tile counter, has storage cabinets beneath.

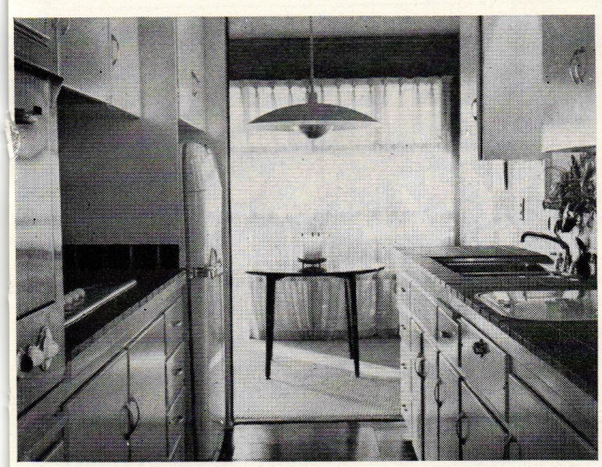


Recessed music alcove houses radio-phonograph and records, with flat shelves to hold each album separately. Fireplace, in adjoining corner not shown, is triangular slab of stone, with iron hood above and 9-speed fan to exhaust smoke.



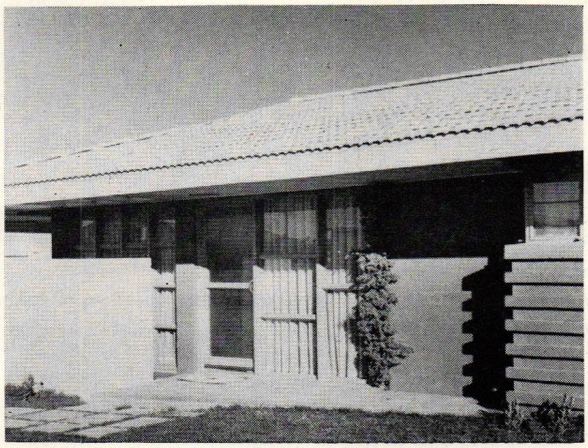
Built-ins are used throughout house, were a whopping $143 worth. In the two children's rooms, which open into one large playroom, much space was saved by built-in units of wardrobes complete with drawers, desks beneath windows.





Galley-type kitchen saves space, opens to both rear service door and front dining area. Refrigerator, washing machine and walls are yellow.

Free-standing bookcase is used to partition off front entry space. Living room has exposed block walls, and perlite plaster ceiling, all painted warm gray.



Handsome front entrance has all the dignity of a larger house, glass areas curtained for privacy. The wall at left encloses a colorful small garden seen only from the dinette.

NEW COST ACCOUNTING SYSTEM helps Texas builders know the scor

Because of severe tax laws and government regulations, builders are increasingly aware that to be successful, their operations must be based on an efficient bookkeeping system. In Austin, Tex., Architect Ned Cole developed an accounting system because he needed a sales tool to give the builders for whom he designs houses and to whom he sells his prefabricated storage walls. *(See Aug. issue '51,* for an account of his operations.)

Cole found builders did not want to accept his newer methods (his truss roofs, absence of load-bearing partitions, substitution of storage walls for ordinary partitions with closets) until they were sure that these would not increase costs. Cole's best sales lever was to get the builder to use an accurate cost system. Now most builders with whom he works use his system.

HOW COLE'S SYSTEM WORKS

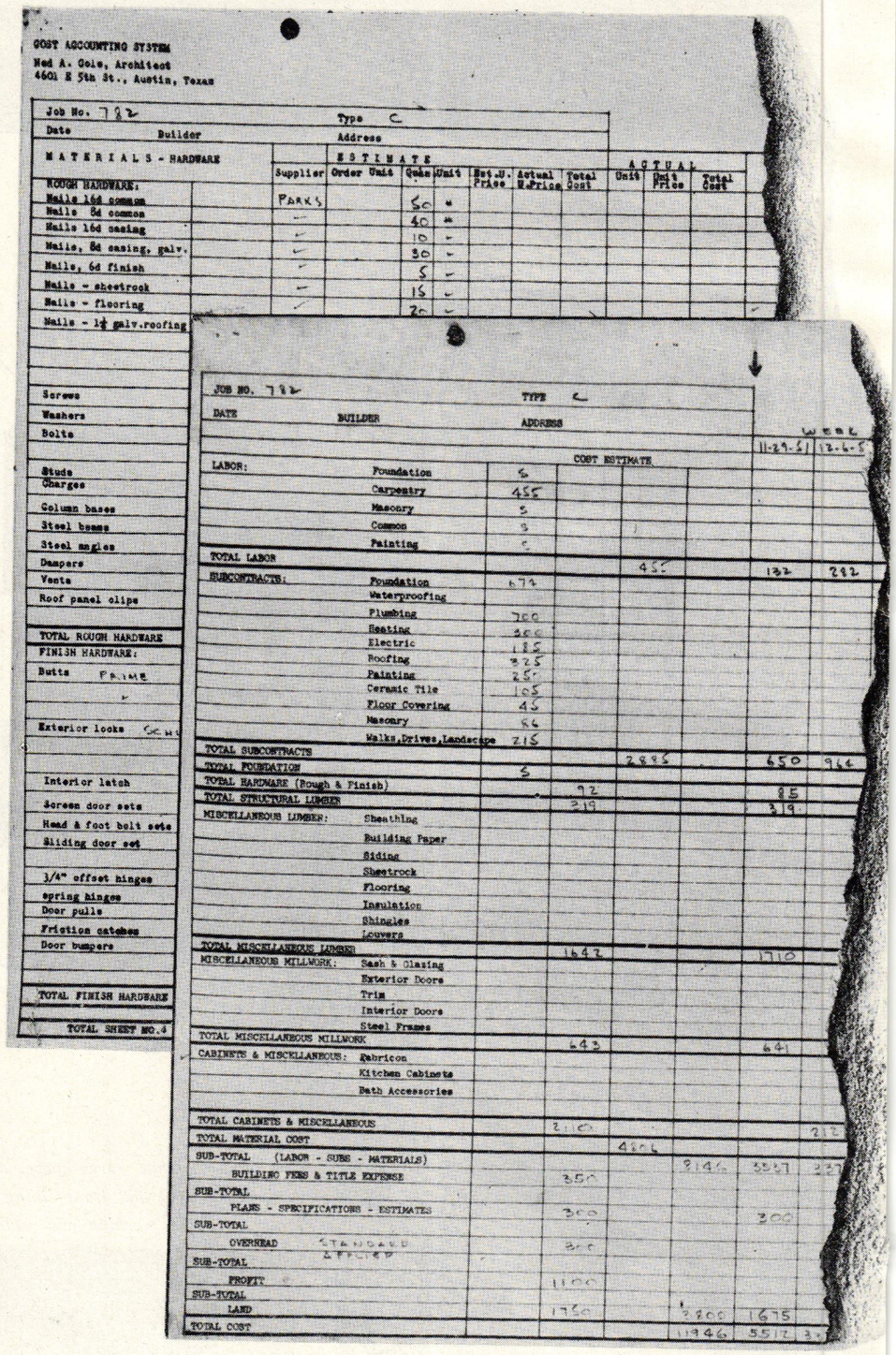
The basis of the system is an accurate cost estimate that will correct itself. It is made by the architect because Cole believes it is a logical part of the design process. Speed of building and of record keeping is so important that accuracy within a 2% margin is allocated to the overage and underage column.

As prices of materials come in, and figures from subcontractors, they are entered by the bookkeeper in the cost analysis portion of the estimate. In an organization where the superintendent orders materials by phone, he changes prices on his copy of the estimate and each Friday turns his revised estimates in to the bookkeeper. Each week the bookkeeper makes a copy of the quantity and price changes and mails them to the architect so his future estimates can include the corrections.

During construction the superintendent notes discrepancies in quantity, sizes or other variations and writes such errors on his estimate, which he forwards to both the bookkeeping department and architect. On his form, the superintendent adds a check mark for each process that is completed.

Labor is handled in a more conventional manner. Each workman, or the foreman if necessary, fills out a daily time ticket at the end of each day. Allocations of time to various tasks are broken down by the even hour *(See form opposite)*. The foreman collects and checks these tickets, passes them on to the superintendent. Next they go to the bookkeeper, who enters them on the labor distribution sheet and on the weekly labor summary.

Thus the builder has a week-by-week record of costs, a comparison with estimates, plus control over the field operation through his cost analysis forms and the construction schedule. The architect


COST ACCOUNTING SYSTEM
Ned A. Cole, Architect
4601 E 5th St., Austin, Texas

Job No. 782 Type C
Date Builder Address

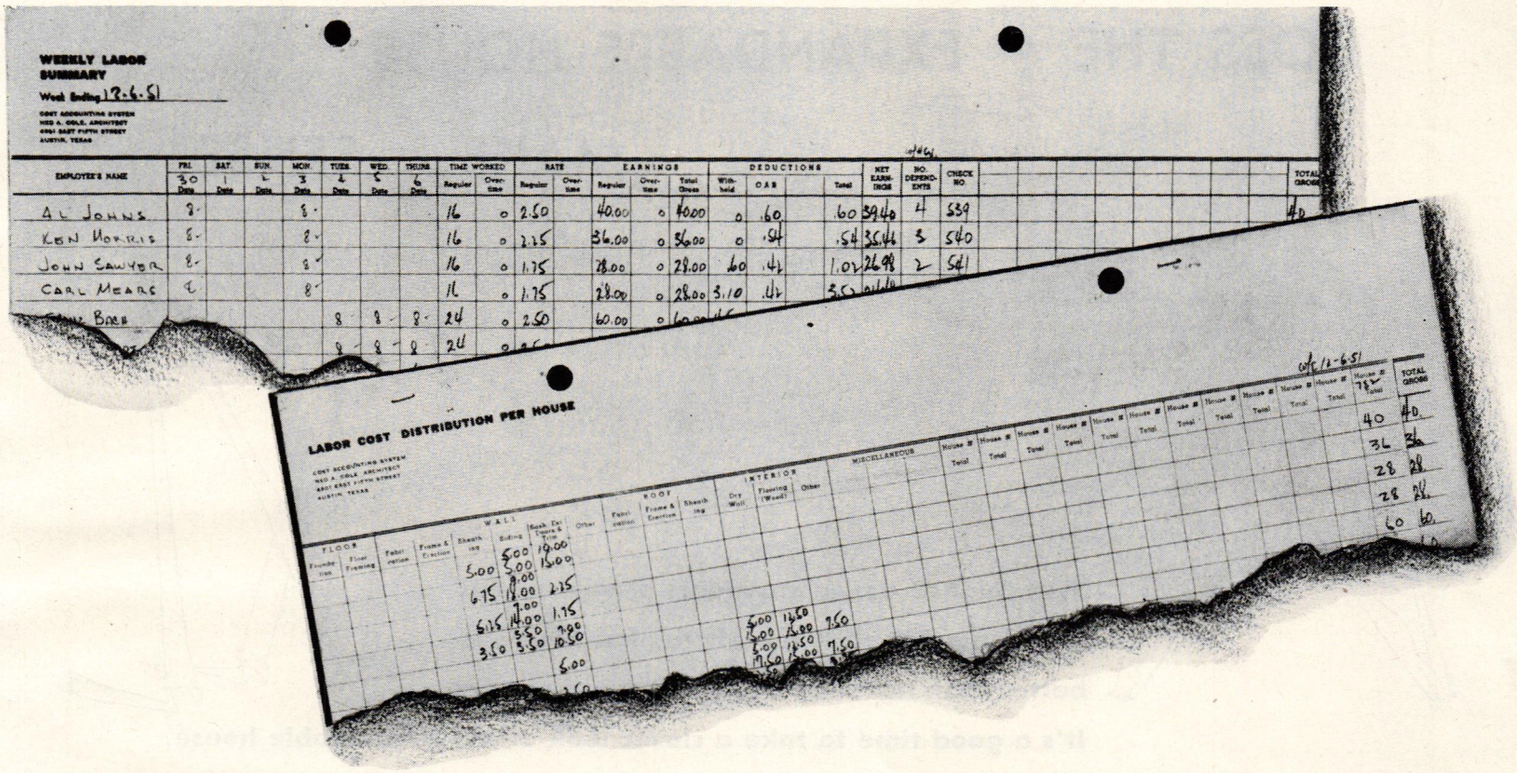
MATERIALS - HARDWARE — ESTIMATE — ACTUAL

	Supplier	Order Unit	Quan.	Unit	Est. U. Price	Actual U. Price	Total Cost	Unit	Unit Price	Total Cost
ROUGH HARDWARE:										
Nails 16d common	PARKS		60	#						
Nails 8d common	"		40	#						
Nails 16d casing	"		10	"						
Nails, 8d casing, galv.	"		30	"						
Nails, 6d finish	"		5	"						
Nails - sheetrock	"		15	"						
Nails - flooring	"		20	"						
Nails - 1½ galv. roofing										
Screws										
Washers										
Bolts										
Studs										
Charges										
Column bases										
Steel beams										
Steel angles										
Dampers										
Vents										
Roof panel clips										
TOTAL ROUGH HARDWARE										
FINISH HARDWARE:										
Butts Paine										
Exterior locks Sc										
Interior latch										
Screen door sets										
Head & foot bolt sets										
Sliding door set										
1/4" offset hinges										
spring hinges										
Door pulls										
Friction catches										
Door bumpers										
TOTAL FINISH HARDWARE										
TOTAL SHEET NO. 4										

JOB NO. 782 TYPE C
DATE BUILDER ADDRESS

			Week 11-29-51	Week 12-6-51
COST ESTIMATE				
LABOR:	Foundation	6		
	Carpentry	455		
	Masonry	8		
	Common	8		
	Painting	5		
TOTAL LABOR			482	132 282
SUBCONTRACTS:	Foundation	674		
	Waterproofing			
	Plumbing	700		
	Heating	300		
	Electric	185		
	Roofing	325		
	Painting	250		
	Ceramic Tile	105		
	Floor Covering	45		
	Masonry	86		
	Walks, Drives, Landscape	715		
TOTAL SUBCONTRACTS			2885	650 964
TOTAL FOUNDATION		6		
TOTAL HARDWARE (Rough & Finish)		92		85
TOTAL STRUCTURAL LUMBER		319		319
MISCELLANEOUS LUMBER:	Sheathing			
	Building Paper			
	Siding			
	Sheetrock			
	Flooring			
	Insulation			
	Shingles			
	Louvers			
TOTAL MISCELLANEOUS LUMBER		1647		1710
MISCELLANEOUS MILLWORK:	Sash & Glazing			
	Exterior Doors			
	Trim			
	Interior Doors			
	Steel Frames			
TOTAL MISCELLANEOUS MILLWORK		643		641
CABINETS & MISCELLANEOUS:	Fabricon			
	Kitchen Cabinets			
	Bath Accessories			
TOTAL CABINETS & MISCELLANEOUS		210		212
TOTAL MATERIAL COST			4806	
SUB-TOTAL (LABOR - SUBS - MATERIALS)			9146	2227 227
BUILDING FEES & TITLE EXPENSE		350		
SUB-TOTAL				
PLANS - SPECIFICATIONS - ESTIMATES		300		300
SUB-TOTAL				
OVERHEAD STANDARD EFFICIENT		800		
SUB-TOTAL				
PROFIT		1100		
SUB-TOTAL				
LAND		1750	2800	1675
TOTAL COST			11946	5512 3

The form immediately above is a "cover sheet" and carries summaries of estimates and weekly costs. Its chief divisions show totals for eight pages, a sample of which is the upper form, dealing with hardware. Other sheets show complete breakdowns for labor, subcontracts, foundations, structural lumber, miscellaneous lumber, miscellaneous millwork, cabinets and bath accessories.



Samples of forms for recording labor for each day and material needed for payroll purposes. The "labor cost distribution" form fits down over weekly summary form, shows how labor costs are divided among some 14 different items.

has a weekly correction enabling him to know unit costs and subcontracts.

Labor posted to cost accounting equals the amount paid out. Thus, the cost accounting and the cash journal balance.

The amount of the subcontractor's contract plus extras posted to cost accounting equals the amount paid out. The books balance here too.

Material costs posted to cost accounting are the estimated quantity and the actual unit cost, while material cost from the journal equals dollars paid out. The two do not necessarily balance. The difference is carried as an "over and short" item—determined by balancing the total material posted to cost accounting against the total purchased in the journal—in columns for that purpose in the journal itself. The difference is proportioned among all the houses included and posted to cost accounting as material correction. In this way total material cost posted to cost accounting plus correction equals total material cost from the journal.

Actual overhead (rent, salaries, office expense, etc.) is handled in a manner similar to that used for material costs.

As the houses are completed, total cost is determined from the job cost sheet. The appropriate entry is made in the journal and posted to the general ledger accounts.

Land cost is also carried as an item. Though, for tax reasons, most builders handle land development in a separate corporation it is included in cost accounting for houses. If the builder develops his own land, additional records must be kept to apportion total costs among the lots involved.

While the basic concept of Cole's system will remain constant, he expects the details will change constantly to meet the needs of builders with whom he works.

What a builder's accounting system should tell him

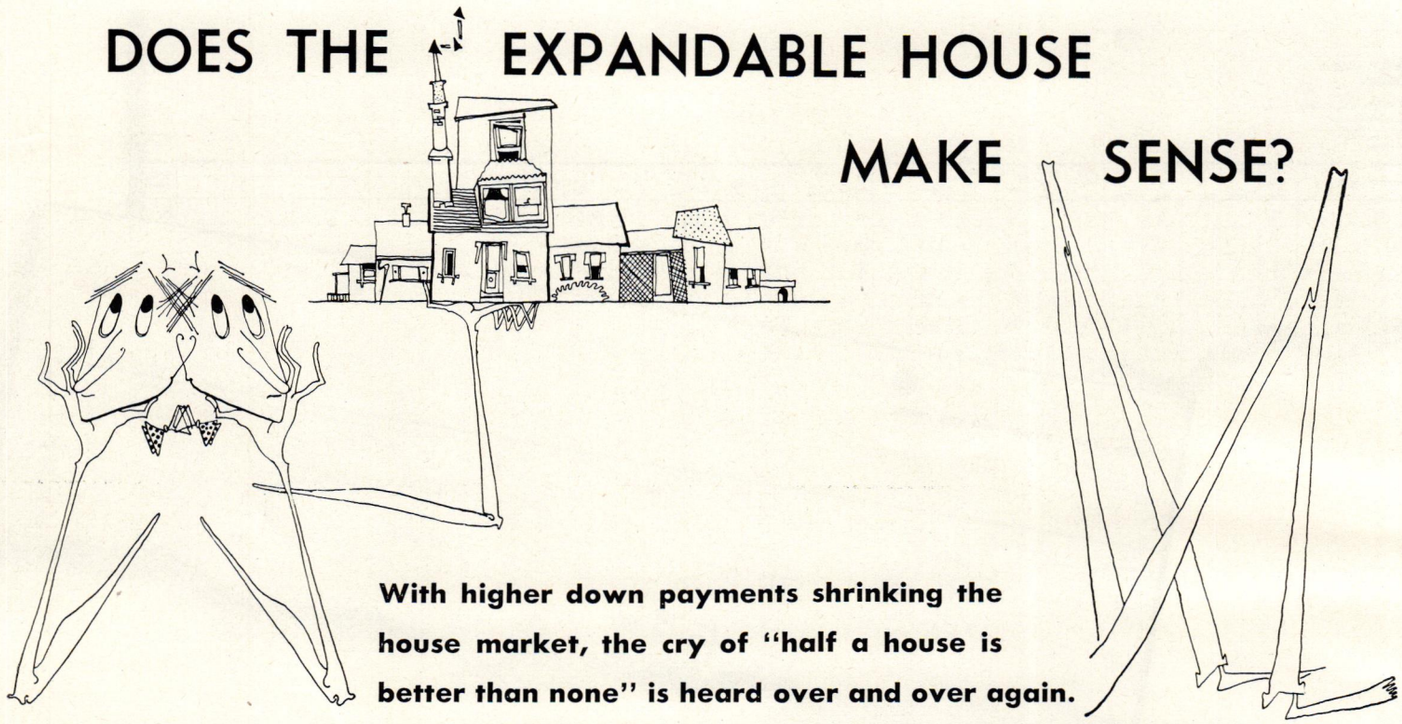
Ned Cole has developed his accounting system around requirements that have been set up by such builders as Walter Stevens, Maurice Cole, P. S. Luttrell, W. P. Maddox, a group of accountants and Architects Fred Day and Madison Mills.

Basically, Cole believes a cost system should let a builder know what is going on throughout his business. While he may build his houses in batches of 12, 50 or more, he sells them one at a time. That is why he should know in advance what each costs. He also wants to know the cost of each phase of construction, and such points as the difference between the cost of a hip and a gable roof. He must know his costs on a weekly basis, not several weeks after a house is finished. He wants a simple system, requiring a minimum of personnel. Cole believes one bookkeeper is enough for every 150 houses.

A builder wants a system that is closely geared to the ordering of material, that gives him office control over materials and an automatic progress check. He wants enough records to satisfy his accountant as well as the tax investigator, but none that are not necessary.

By tying the cost accounting to the estimate instead of to the cash book or voucher register, the system gives up-to-date costs per house, furnishes a construction schedule and a purchase record in one operation; gives advance notice of the cost of the house, including the cost of each phase. The information is complete, yet it requires relatively little time to keep.

DOES THE EXPANDABLE HOUSE MAKE SENSE?



With higher down payments shrinking the house market, the cry of "half a house is better than none" is heard over and over again. It's a good time to take a closer look at the expandable house.

Expandability makes sense depending on how you answer three more questions:
—What kind of expansion?
—What price expansion?
—What size and price house are you talking about?

Expansion alone won't cure the space blues of an over-economized "economy house." Nor is the public likely to buy a house merely on the strength of a promise. Most people interested in an expandable, two-bedroom house would rather have a full three-bedroom house every time—if they could put their hands on the down payment. What is more, a lot of them are scraping up the extra cash when builders like Levitt, Bohannon, Place, Earl Smith and others offer them a good buy under $12,000. These builders deplore the fact that many people are paying $3,000 to $4,000 for the third bedroom, a price which has been proved way out of line. The truth is, a third bedroom (without a second bath) can be the cheapest room in the house. Figured apart from the utility core (which is much the same whether there are two bedrooms or three) the third bedroom costs nearer $5 a sq. ft. than the over-all average of $9.

Here are four good reasons why the buyer might well be wary of the golden promise of expandability:

1. Adding a room is always more expensive than building it at the start, especially if the original house is put up by a volume builder and the addition by a small contractor.

2. When a family has grown to the point that it needs more room, the budget is already strained by a larger family circle.

3. A 3-bedroom house and an expanded 2-bedroom house are rarely the same thing. Everything from lot size to storage space is scaled down and adding a bedroom throws it off balance.

4. If most of the houses in the neighborhood stay small (more than 75% usually do) the chances of recovering full expansion costs on a resale are pretty slim.

It's too much to expect any conventionally constructed house to take care of all family space needs from the cradle to the grave. That's the job of the well planned subdivision, a community where families can move to larger or smaller quarters without breaking up happy associations. Too many mass builders are sacrificing that choice on the high altar of standardization when even the auto maker offers a choice between a coupé and a sedan.

Who wants expansion?

However, there is no doubt about the heart-tug implicit in expandability. What could be more appealing than plenty of room for visiting grandchildren, better parties, or just a quiet place to work? Architects Matern & York, who do a whopping business in stock plans for the public (as well as designs for builders) report that expandable houses rank high among their most popular mail-order plans. But the demand does not show up throughout the full range of house sizes they offer. More than half the people requesting plans *under* 900 sq. ft. want a larger house. *Over* 1,100 sq. ft., almost everyone is eager for extra space. This leaves a gap, between 900 and 1,100, the category which sells best, and where people get the one-story house they want and want no more.

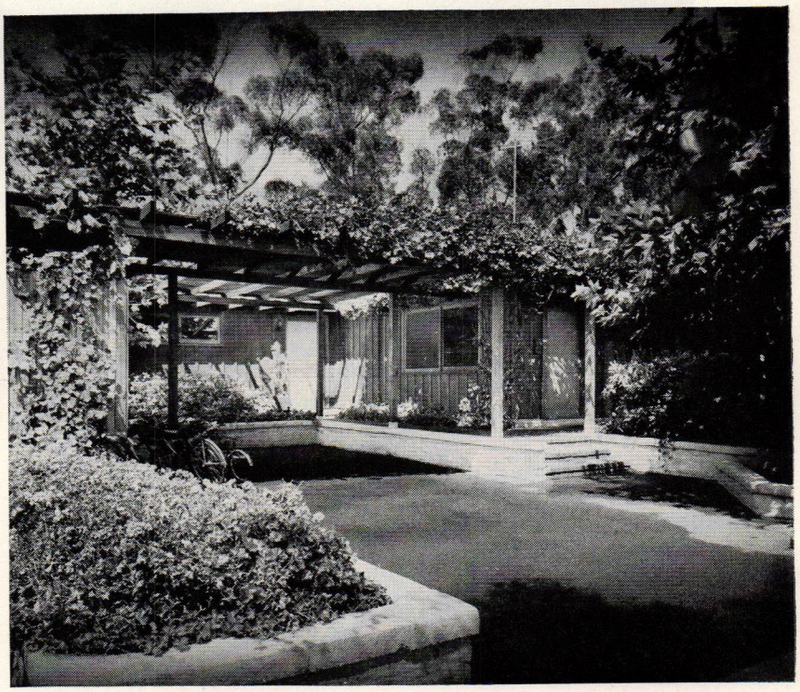
Who buys expansion?

This estimate tallies closely with that of the shrewdest guessers in the business—the legendary Levitts. This year they are offering two houses; one is a three-bedroom, 1,000 sq. ft. house at $9,990, the other a three-bedroom 1,600 sq. ft. house which sells for $16,990 and has a large expansion attic. They figure that the smaller house with its convertible third bedroom hits squarely at the requirements of 90% of the house-buying public. Not to miss a trick, for each siting of the plan they suggest how another



Stage 1

Robert C. Cleveland Co.



Stage 2

bedroom might be added. However, they don't think even one person in ten wants a fourth bedroom badly enough to go to the expense and trouble of building it.

Contrary opinions are voiced from the Southwest. Fifteen per cent of families buying Fritz Burns's two-bedroom house convert the garage. Texas Builder Dick Hughes found that 33% of the 2-bedroom houses he built five years back have been added to, "promiscuously, you might say." Now he makes easy-to-read, expansion plans available on all his houses.

What makes expansion work?

But everyone agrees on what makes a plan more expandable:

The plan that is specific: The plan that shows a vague dotted area next to the house is virtually useless. A specific plan helps keep obstacles to future expansion out of the original house; gives the owners a realistic estimate of costs; and goes a long way toward protecting the future appearance of the development.

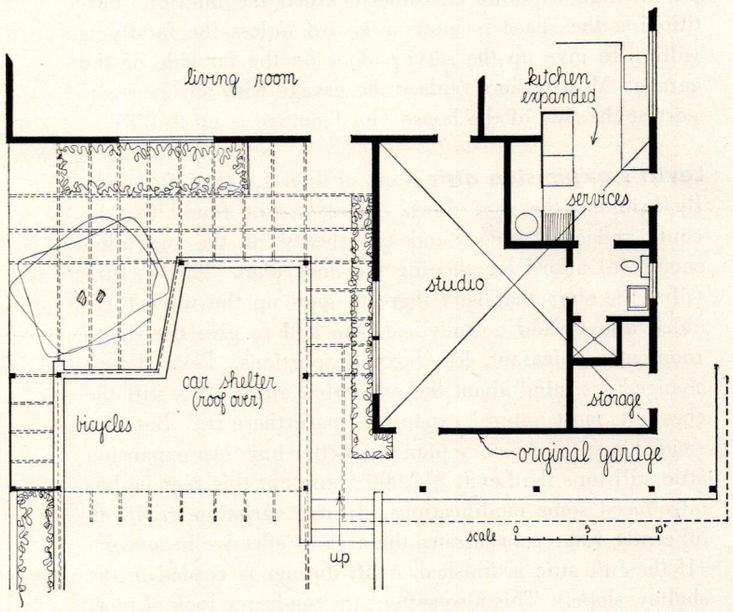
The plan that is workable: The builder who doesn't provide a heating system large enough to take care of the addition he suggests is in for considerable ill will. It's also a good idea to rough in plumbing for another bathroom, especially if the new bedroom is to be on another floor or on the other side of the house.

The up-front garage: On the average narrow lot, a front garage leaves room for side expansion. A corner lot makes spreading out easiest since you have two choices in fronting the garage.

The down-back addition: Generally speaking, back-of-the-lot extension is less complicated; there is more space and you don't get fouled up with the entrance walk or set-back restrictions.

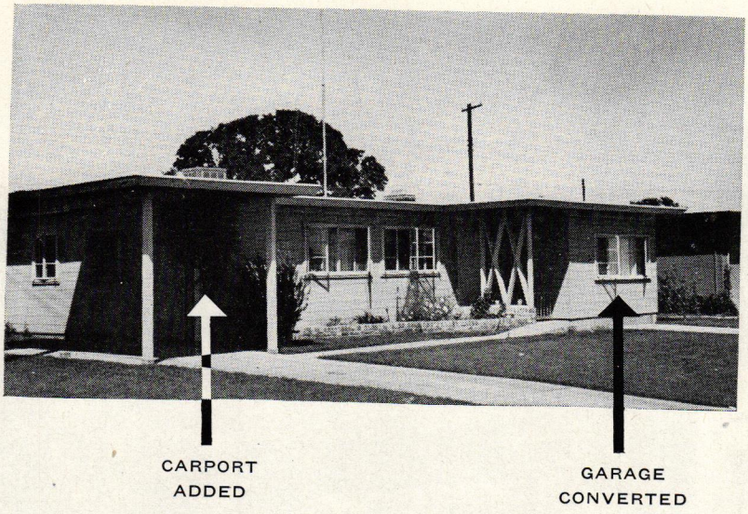
The simple roof extension: The flat roof is most versatile—you can extend it in any direction or poke up a clerestory as you choose. Pitched roofs are more tricky, especially in a chunky plan.

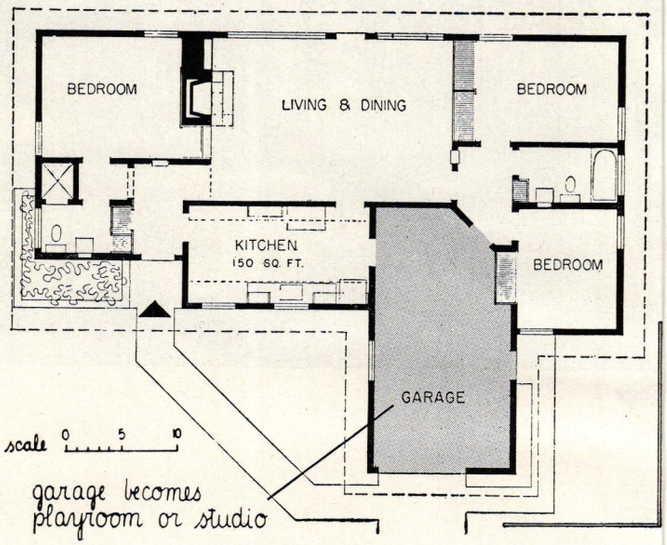
The simple hall connection: Today's small bedrooms can ill afford to lose 3′ to a by-passage and no one wants to live in a hall bedroom. Easiest access is through a well placed closet.



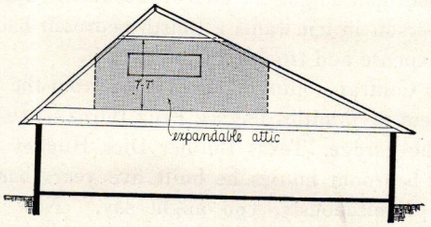
Most effective space overflow is the attached garage. Planned with expansion in mind, it has the triple virtues of economy, convenience and good looks. In his Los Angeles house (*above*) Designer James Roth uses the whole front strip of his 50′ lot for expansion. In stage 1 (*left, above*) the double-size garage occupies the right half. In stage 2 the car goes under a carport added at left. The front walk cuts through center. The plan (*above*) shows how the converted space connects up with both kitchen and living room (this doorway was roughed into the wall at the start, later opened up). Roth now uses the space as his office, plans to make it a bedroom for his two sons when office space in town is more available. The bathroom and laundry will be completed at that time. To date the house has cost him $8,500 plus $750 for conversion.

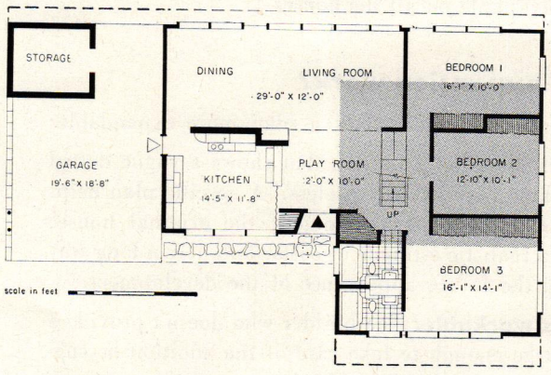
EXPANSION BY CONVERSION



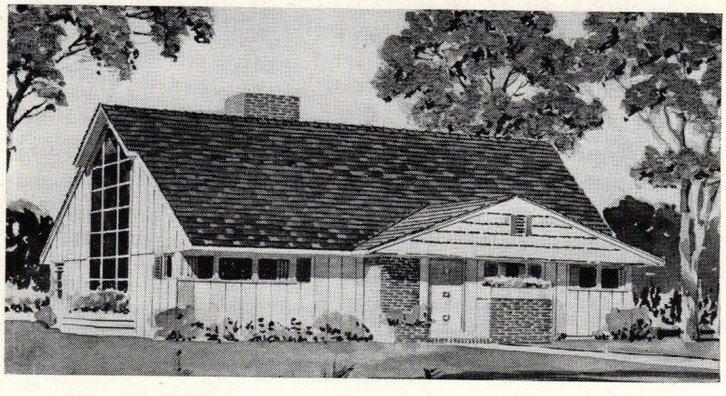


Garage is pushed part-way into house above in Builder Jere Strezik's most recent Town & Country subdivision at Sacramento. (Oct. issue, '51). This plan makes the rear third of the garage act as a passageway between the kitchen and two children's rooms (the master bedroom and bath are on the other side of the house). As a playroom, workshop or studio this space is a natural: it is under the watchful eyes of mother in the kitchen, it has a separate outside entrance and the children's bathroom is a few steps down the hall. Finishing the space is so easy many owners have already sold the garage door, put in high windows and fiber-boarded the interior. Partitioning the space is more awkward unless the family is willing to give up the service door on the far side of the garage. Most owners replace the garage with an open carport at the side of the house (lot frontage is up to 85′).

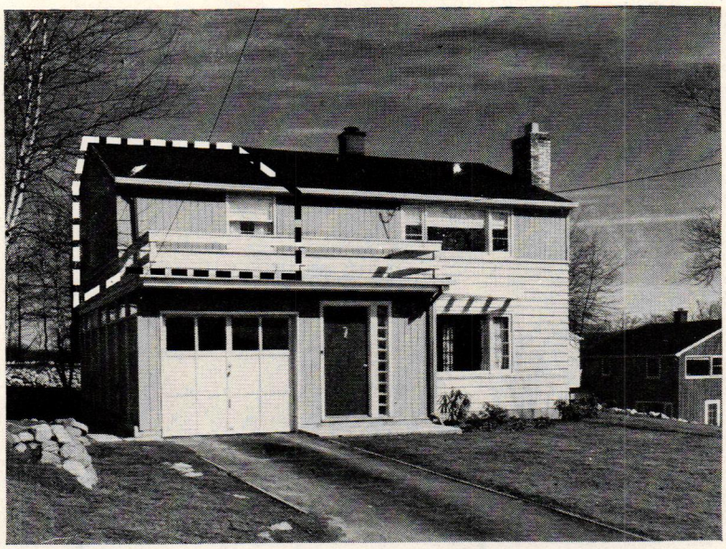




Levitt's expansion attic is out of their 1,000 sq. ft. house. By bringing the roof down, Alfred Levitt found that he could reduce the cost and complexity of the operation enough to afford lengthening the floor plan. This in turn (plus the stair that isn't there to gum up the works) enabled him to add a study-bedroom and to give the living room more pleasant, less boxy proportions. Levitt hasn't changed his mind about the expansion attic: "It's still the cheapest, most natural expansion space there is." But in a small house, a one-story plan is a better buy. An expansion attic still tops the Levitt $17,000 house but this year he has introduced some modifications. In one variation, *right*, an off-center ridge concentrates the area of effective headroom. (If the full attic is finished, a lift dormer is needed in the shallow slope.) This also softens the top-heavy look of most expansion attics. In another variation, he uses glass high in the gable end to admit light. In all models the attic covers only part of the house, the rest of the roof spreads low to balance attic height.

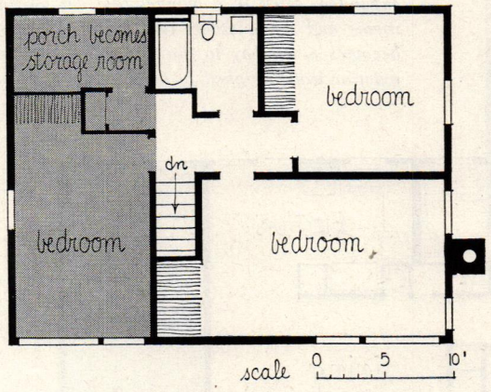


Another switch on the expansion attic is to make part of it into a balcony overlooking the living room. Long Island Architects Matern & York recently introduced the one shown left to their file or stock plans. (They have also used a similar balcony room in a smaller house built at Forest City.) This plan lets part of the living room rise up to the rafters and uses the gable-high living room window to light a balcony study as well. Space next to the other gable is given over to a bedroom. A secondary gable roof, running at right angles, takes the place of a dormer in bringing light to the bathroom toward the center of the attic. (*See floor plan, directly opposite.*)

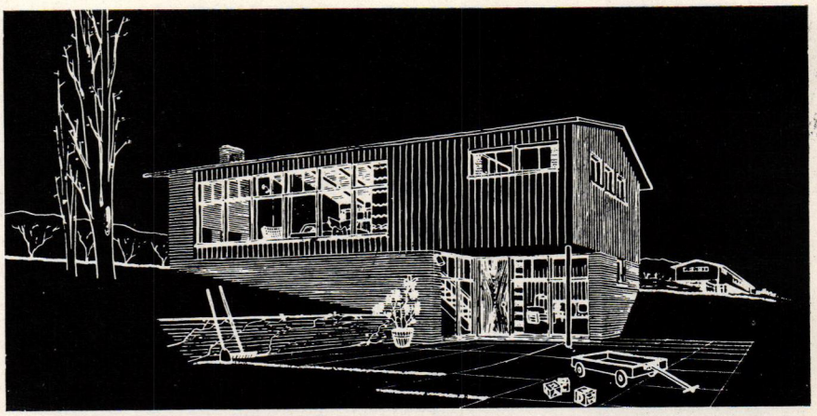


Joseph W. Molitor

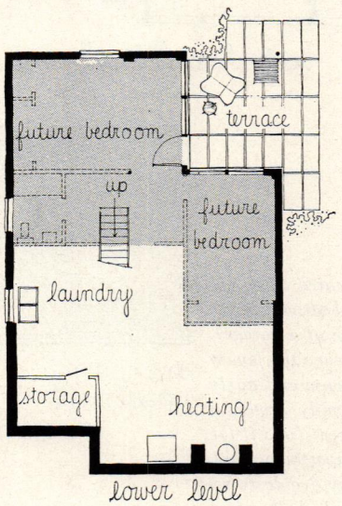
EXPANDABLE HOUSE

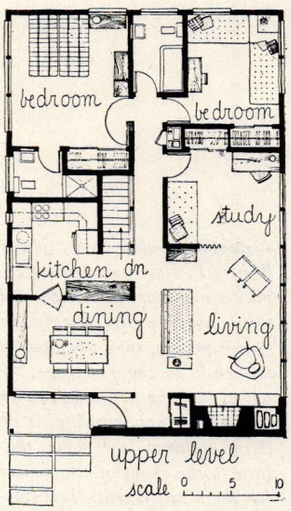


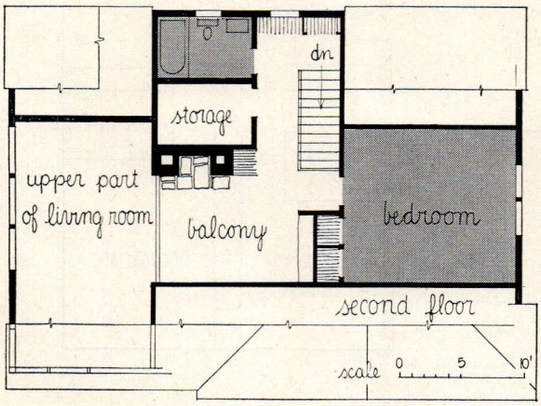
An unfinished second-story bedroom, (*above*) over the carport, has been very popular among the houses built in New Jersey by the Zamore brothers. The same house has also been offered without the third bedroom for $1,000 to $1,300 less, the space being a deck which might be enclosed at a later date. About 20% of the customers bought 2-bedroom version but so far only one has taken advantage of the expansion provision. The Zamores are among the few developers still building a two-story house. They are willing to buck the trend because they feel they can offer more within this economical form. However, they are also planning to go into production on a one-story house this spring to tap the lower income market.



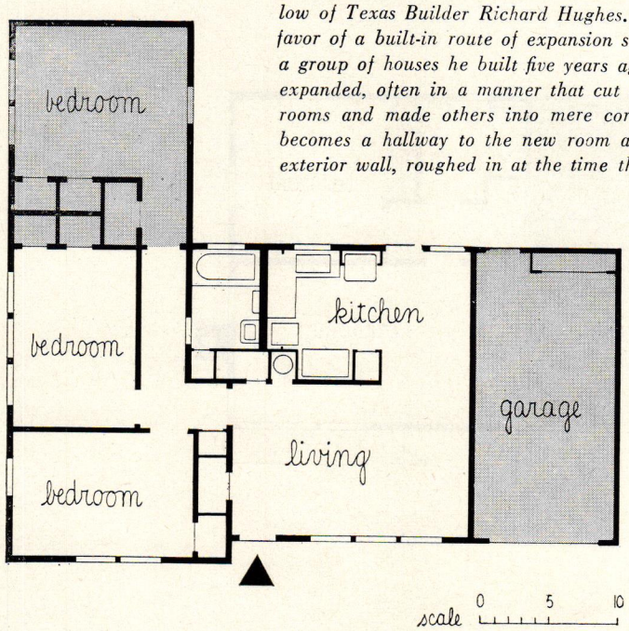
Expansion down a hillside (*right*) is an attractive possibility frequently overlooked by builders. Traditionally, a builder feels just two ways about a hill: you mow it down or you smooth out a flat spot and maybe put garage doors into the exposed basement wall. Often as not this wall faces southward and when the doors are open the sun streams in to warm the oil spots on the floor. But in the hills around Washington there are now a few subdivisions where houses are sited in a way that turns this kind of space into exceptionally pleasant rooms. Architect Joseph Miller designed this house for a group that developer Bert M. Tracy is building in Silver Springs, Md. Basements are standard in this area so the usefulness of this one is a real selling point. Plumbing and heating are roughed in. Finishing estimate: $1,500.



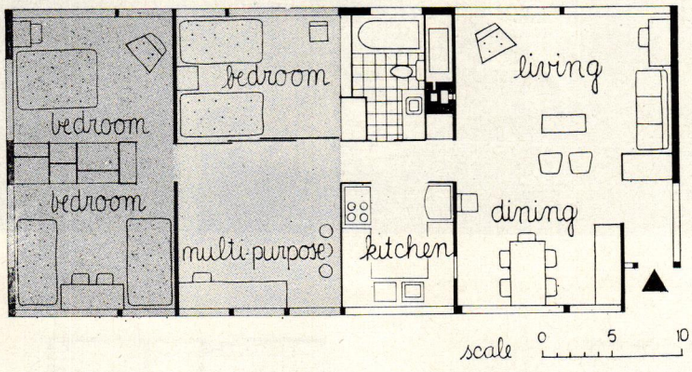




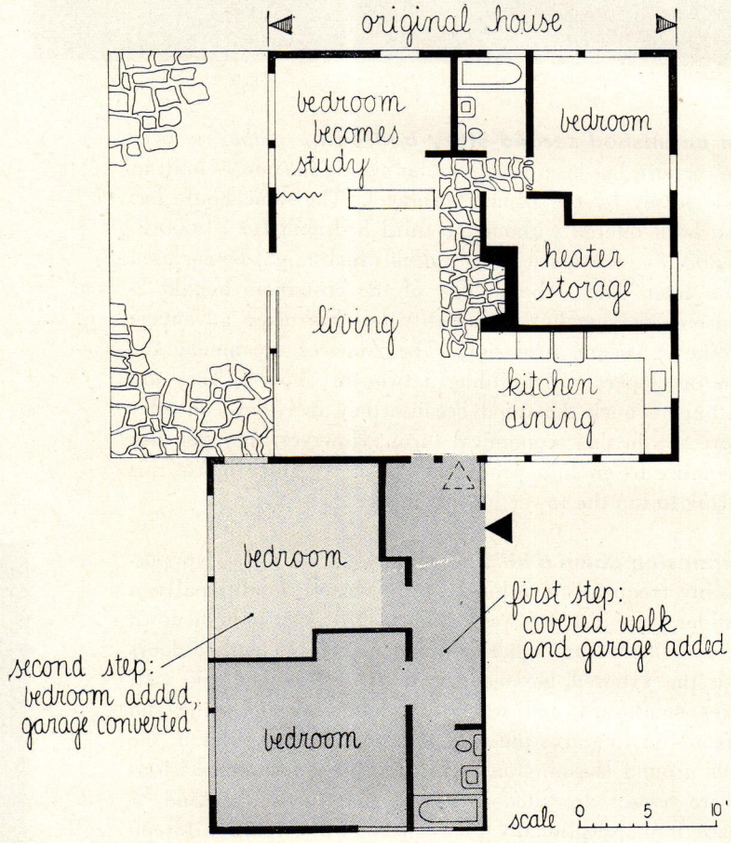
EXPANSION BY ADDITION



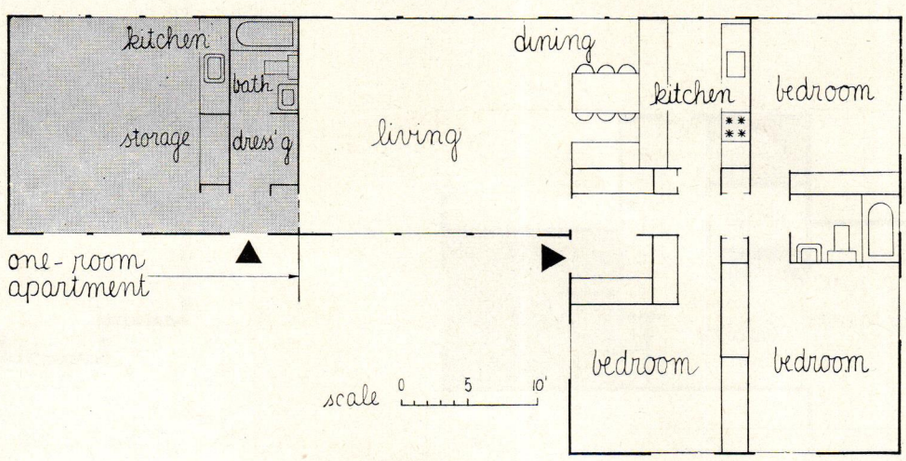
Addition of a third bedroom *is made as easy as possible in plan below of Texas Builder Richard Hughes. He has been emphatically in favor of a built-in route of expansion since he took another look at a a group of houses he built five years ago. A third of the owners had expanded, often in a manner that cut off light and air from existing rooms and made others into mere corridors. In this plan, a closet becomes a hallway to the new room and the door framing is in the exterior wall, roughed in at the time the house is built.*



An in-line plan *lets house below by Architect George Matsumoto grow twice, 12′ at a time. The basic house is one large room plus a good-sized mechanical core. First addition is two bedrooms separated by a storage wall (the one adjacent to the kitchen would be handy as a nursery). Later, another 12′ segment is added and the storage wall is shoved in to partition the area. Now, to supplement the living room, the nursery becomes a multipurpose room which can be thrown together with the first bedroom by means of a sliding wall.*



House above in two steps *began as an economical 30′ square. In it, Architect Carl Koch allotted more than half the space to an open L formed by the kitchen, living room and study-bedroom. In step No. 1 garage and covered walk are added. In step No. 2, a bedroom goes between house and garage, the garage becoming a bedroom and bath, the covered walk a foyer and hall. The original house remains unchanged except for study furniture.*

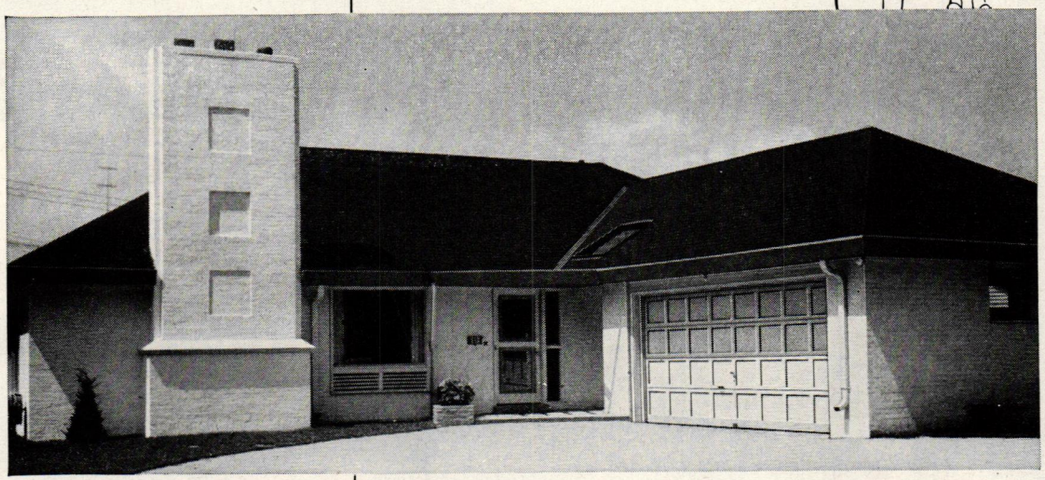


A duplex house, *right, planned by research engineer Robert L. Davison. Composed of a three-bedroom house plus a one-room apartment (about the size of a garage), this is how it works into the family cycle: when the family is two people, they use apartment, rent house and apply the cash to the mortgage. When the family grows, it moves into the house and rents the apartment (and if the family keeps on growing, it absorbs the apartment too). After children have gone, the parents may decide to return to the small quarters, saving the rental of the house for their retirement. Davision has built two versions of the idea for his own use, finds it work out fine.*

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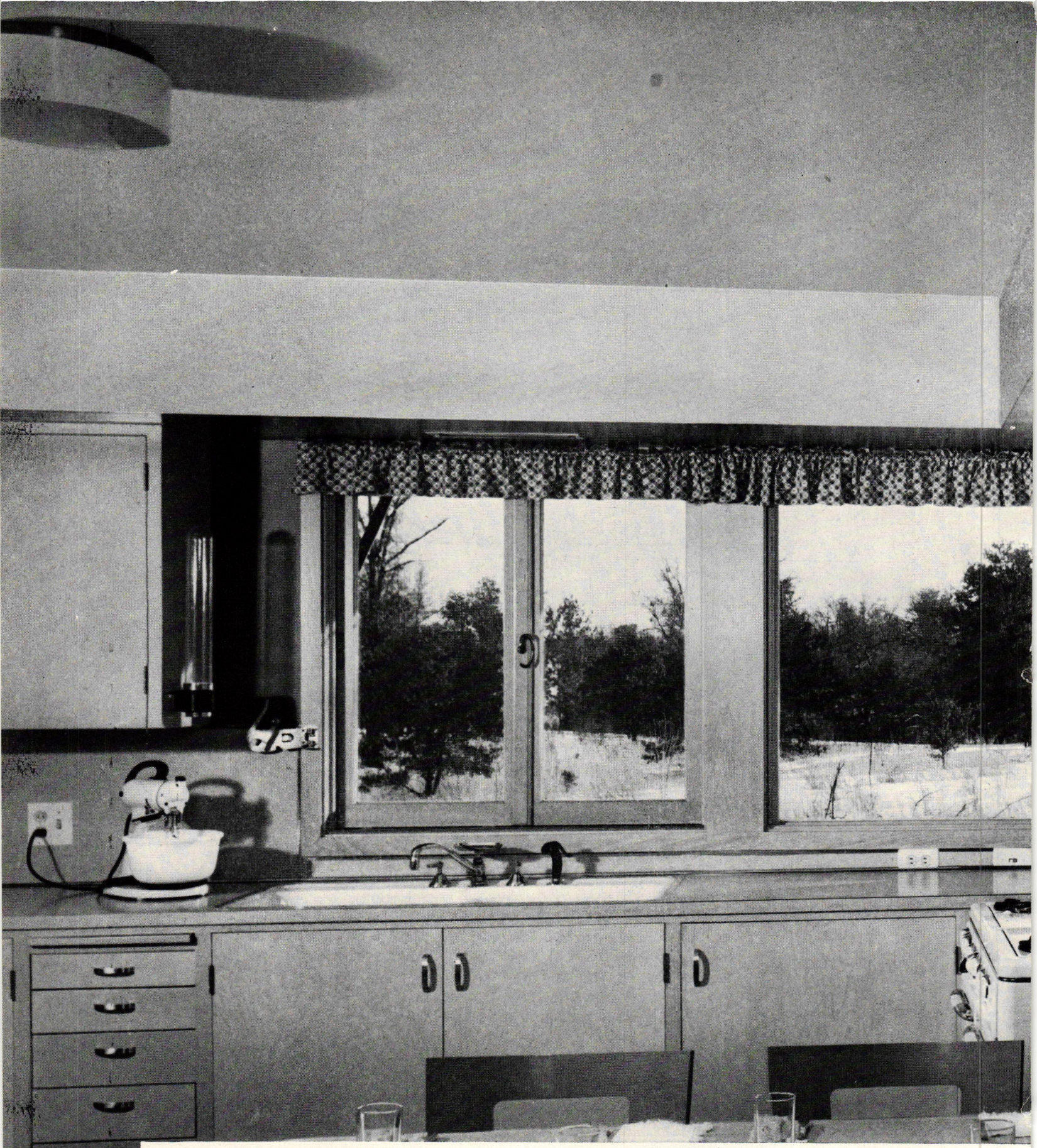
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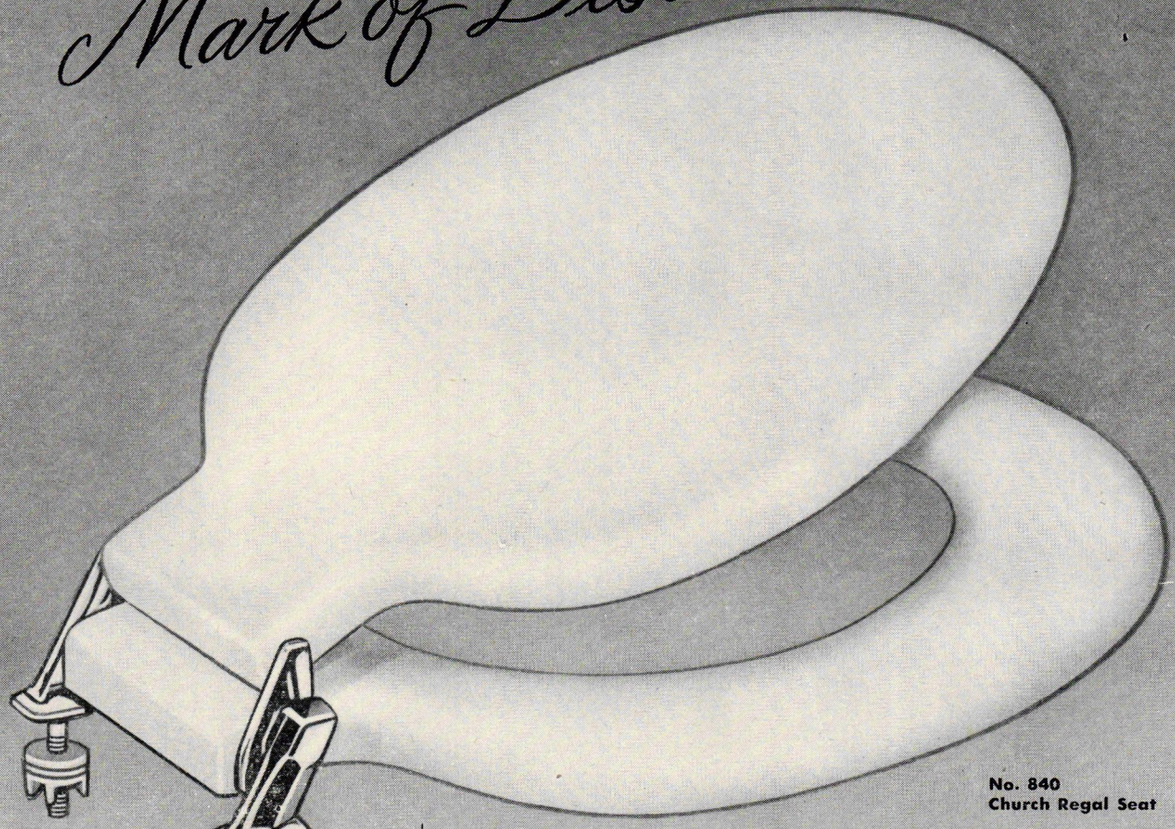
*TRADEMARK OF ANDERSEN CORPORATION

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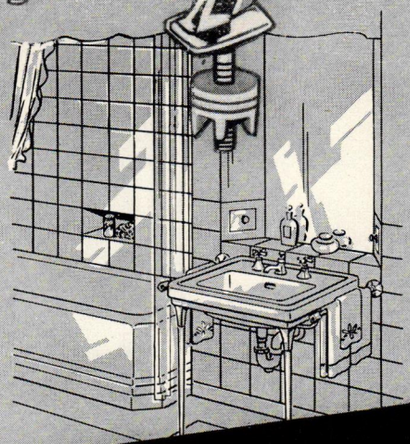
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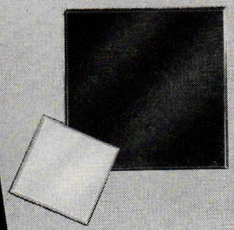


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NEWS OF INTEREST TO BUILDERS • PUBLISHED BY The RUBEROID Co., 500 FIFTH AVE., NEW YORK 18, N. Y. • NO. 2

MORE AND MORE BUILDERS CASH IN ON RUBEROID STONEWALL BOARD'S ECONOMY

Versatile, easy-to-use asbestos-cement board outperforms other materials

There's real profit news for builders in the success Ruberoid Stonewall Board has been scoring. There's no wonder its popularity has been growing. It is such a universally suitable building material that more and more builders are switching to it for many types of building or remodeling jobs.

It's so easy and economical to "work"! Here's one way. Just score Stonewall Board with a Stonewall cutter or other sharp tool along a straight edge. Then snap it off. Stonewall breaks clean and true. Or, for large production, Stonewall can be sawed with abrasive wheels or hand saws. Wherever the "score and snap" method has been demonstrated for on-the-job fitting, builders have been convinced that it will save them valuable time and money. And there are literally hundreds of jobs where this method is ideal—such as blocking fireplaces, making fire barriers, soffits, re-siding farm buildings, etc. And Ruberoid Stonewall Board is ideal either as an exterior covering or an inside lining and partitioning.

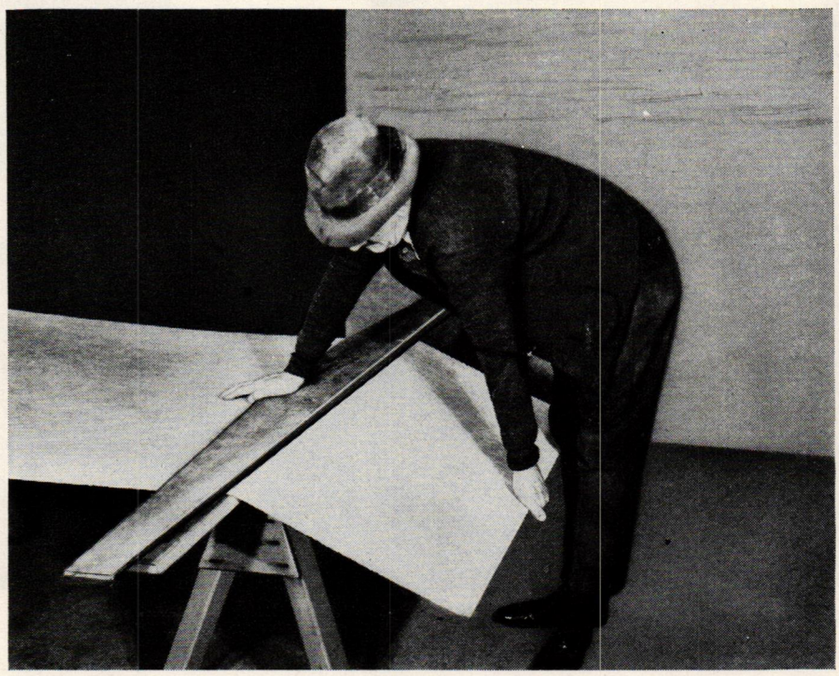
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L. M. Gunderson pointing out one of his typical Electronic Moduflow homes to a prospect.

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A recent report from L. M. Gunderson, Shaker Heights, Ohio, one of Cleveland's leading builders

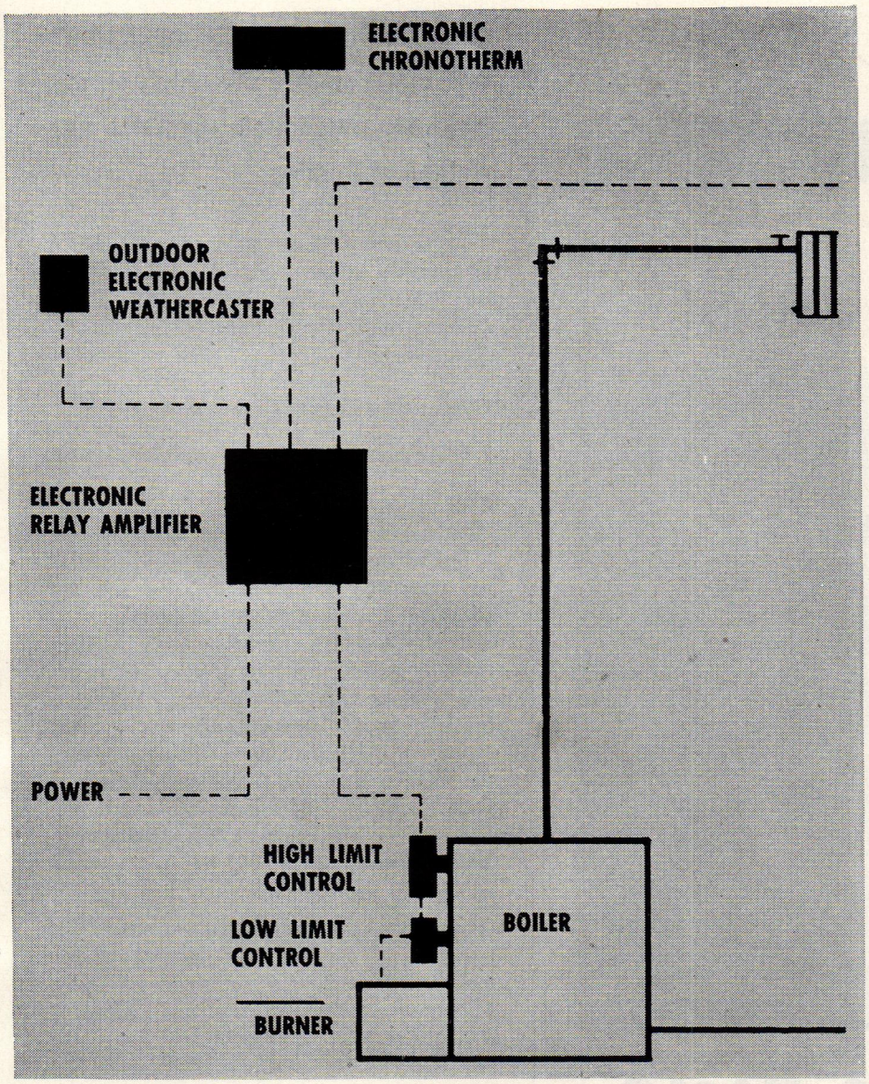
"I'm not in the mass-production housing business. I build houses one at a time, custom-made, for people who want *really comfortable living*. And I've found, through experience, that Honeywell's Electronic Moduflow system provides the answer, plain and simple, for home-owners who want the best in heating comfort at reasonable cost.

"Several years ago, when I first heard about Electronic Moduflow, I decided to try it out in my own home. It was one of the wisest decisions I ever made—we spent the most comfortable winter of our lives. So I began recommending it to every customer who came to me with plans for building a house.

"Today I'm putting up 'Electronic Moduflow Homes' all over the greater Cleveland area. And the Honeywell custom-comfort idea, far from being hard to sell, has made selling *easier* for me. It has also increased the value of the homes I'm selling—satisfied a lot of customers—and helped enhance my reputation as one of the better builders in these parts."

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"It's easy to sell Electronic Moduflow to customers who want the best"

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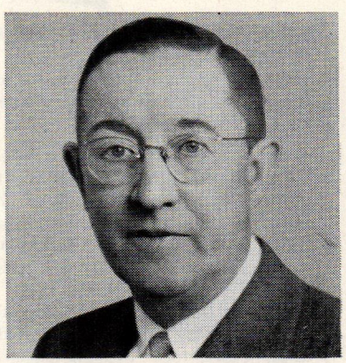
"Then I take them inside the house, and go over the completely automatic functions of the system. I point out that the temperature is regulated by a clock thermostat – the Electronic Chronotherm – and always assures them of getting up in a warm house every morning, regardless of how cold it is outside.

"I wind up telling them how a system governed by the latest thing in electronics is *bound* to be greatly superior to ordinary heating systems – and is, in fact, something like 84 times more sensitive.

"After *that* kind of demonstration, I rarely fail to get the go-ahead on a Honeywell Electronic Moduflow system for my customer's new house."



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E. L. Wirth, Lincolnwood, Ill., says:

"I can't say enough about the Electronic Moduflow control system I had installed in my home last year. It has kept our home at a nice, even, uniform temperature ever since – regardless of how cold or mean the weather has been outside."

For additional facts and application data on Electronic Moduflow (the system that will help you *better satisfy* your *customers*) call your local Honeywell dealer. Or write Honeywell, Dept. HH-2-36, Minneapolis 8, Minnesota.

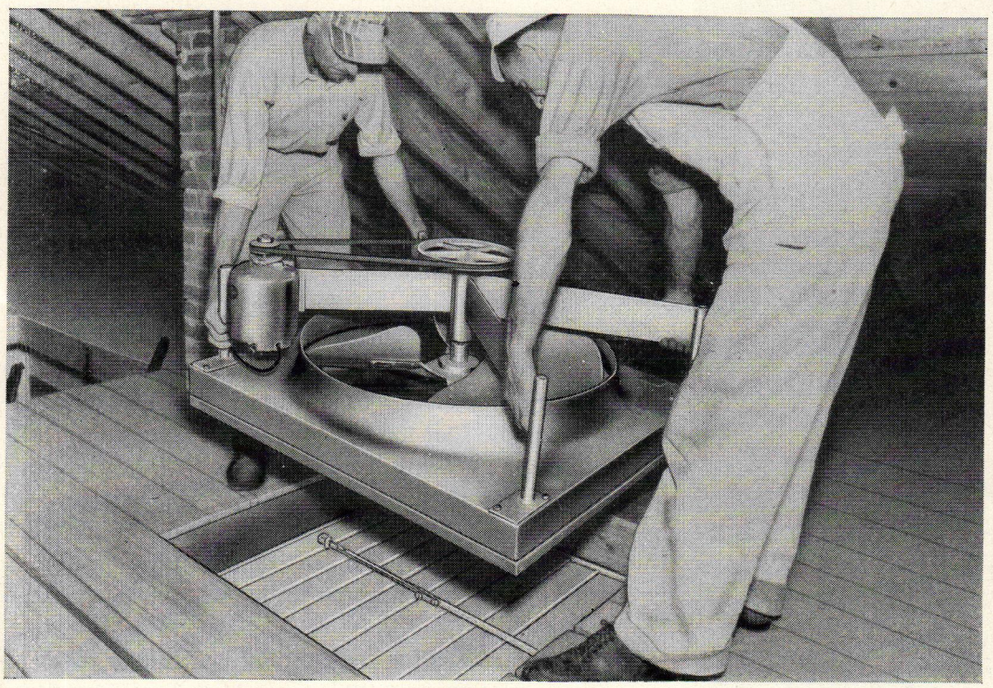
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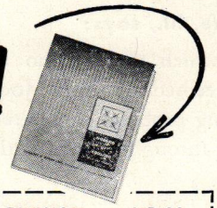
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FEWER STUDS, SPACED SHEATHING

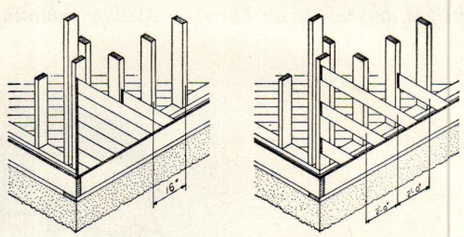
save materials, are adequately strong. HHFA-sponsored tests suggest a new method of framing

Tests currently being conducted under HHFA sponsorship at the Forest Products Laboratory, Madison, Wis. indicate that home builders could save on the average three-bedroom house:

- One wall stud out of every three
- As much as 1,000 bd. ft. of sheathing lumber
- Up to 35 lbs. of nails

In the "new" method studs are placed 2′ o.c. instead of the usual 16″ and diagonal sheathing is applied at vertical intervals of 2′ instead of touching. Preliminary reports state this system has a racking strength equal to: conventional studs 16″ o.c. with 1 x 4 let-in braces on a 45° diagonal, solid sheathing and siding. If final tests prove satisfactory and the method is widely used, say officials of HHFA's Division of Housing Research, nation-wide savings could be "spectacular": in 100,000 houses, 136,000,000 bd. ft. of lumber and 35,000 kegs of nails.

Studs 2′ o.c., now in limited use, meet FHA requirements for one-story houses. HHFA feels confident spaced sheathing will pass FHA in most localities, result in savings to the builder "in most cases."

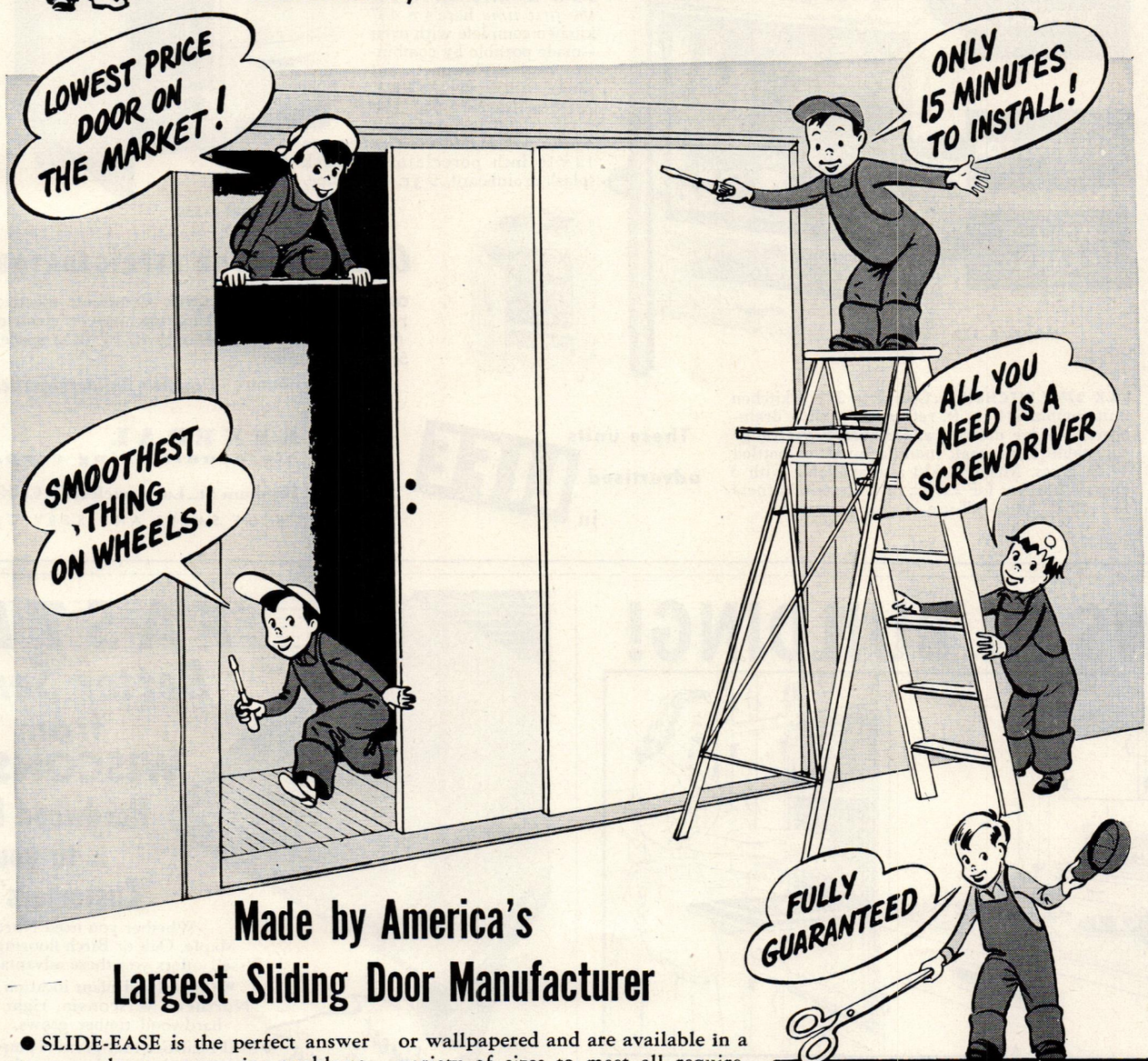


SOLID SHEATHING SPACED SHEATHING

The only drawbacks, HHFA points out: 1) The system will not work well in severe climates unless insulation and vapor barriers replace the weather-resistant function of normal solid sheathing. 2) Studs 2′ o.c. require heavier interior wall coverings to avoid deflection and breakage. Some of the savings will be lost when builders have to use ½″ wallboard instead of ⅜″, high-rib lath instead of diamond mesh, ⅜″ plywood rather ¼″. With suppliers standardized on interiors for 16″ studs, heavier wall panels might be harder to get in quantity. 3) The system works best with vertical siding but doesn't give a solid nailing surface for shingles. Many builders have found large-panel wallboard or plywood sheathing is faster and stronger than the more laborious diagonal type, gives a weathertight, continuous nailing surface.



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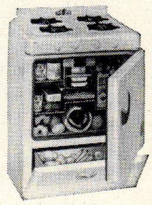
L & K 27½" KITCHEN... Complete 27½" kitchen unit combines 4 cu. ft. refrigerator, sink, drainboard, storage drawer, and 3-burner gas range adjustable to natural, manufactured, or bottled (LP) gases. Model R-520 also available with 3 electric burners for 220 v., or 2 electric burners for 110 v. "plug-in" use. 5 year guarantee.

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MODEL S-550



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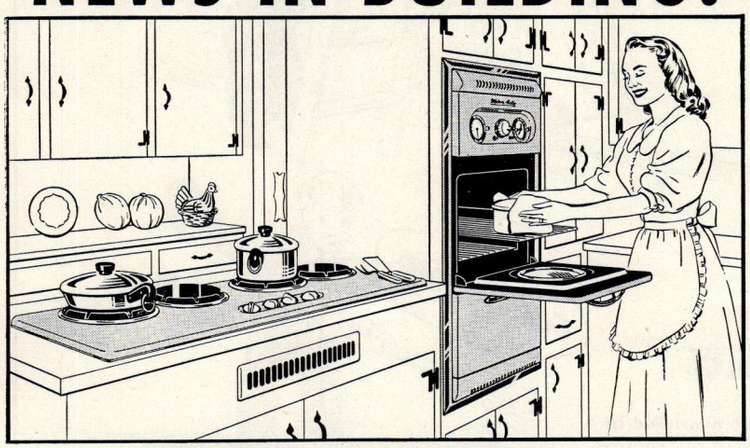
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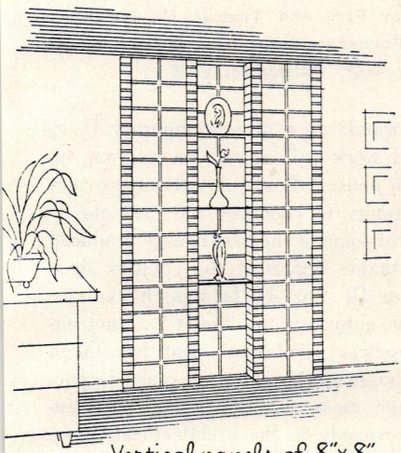
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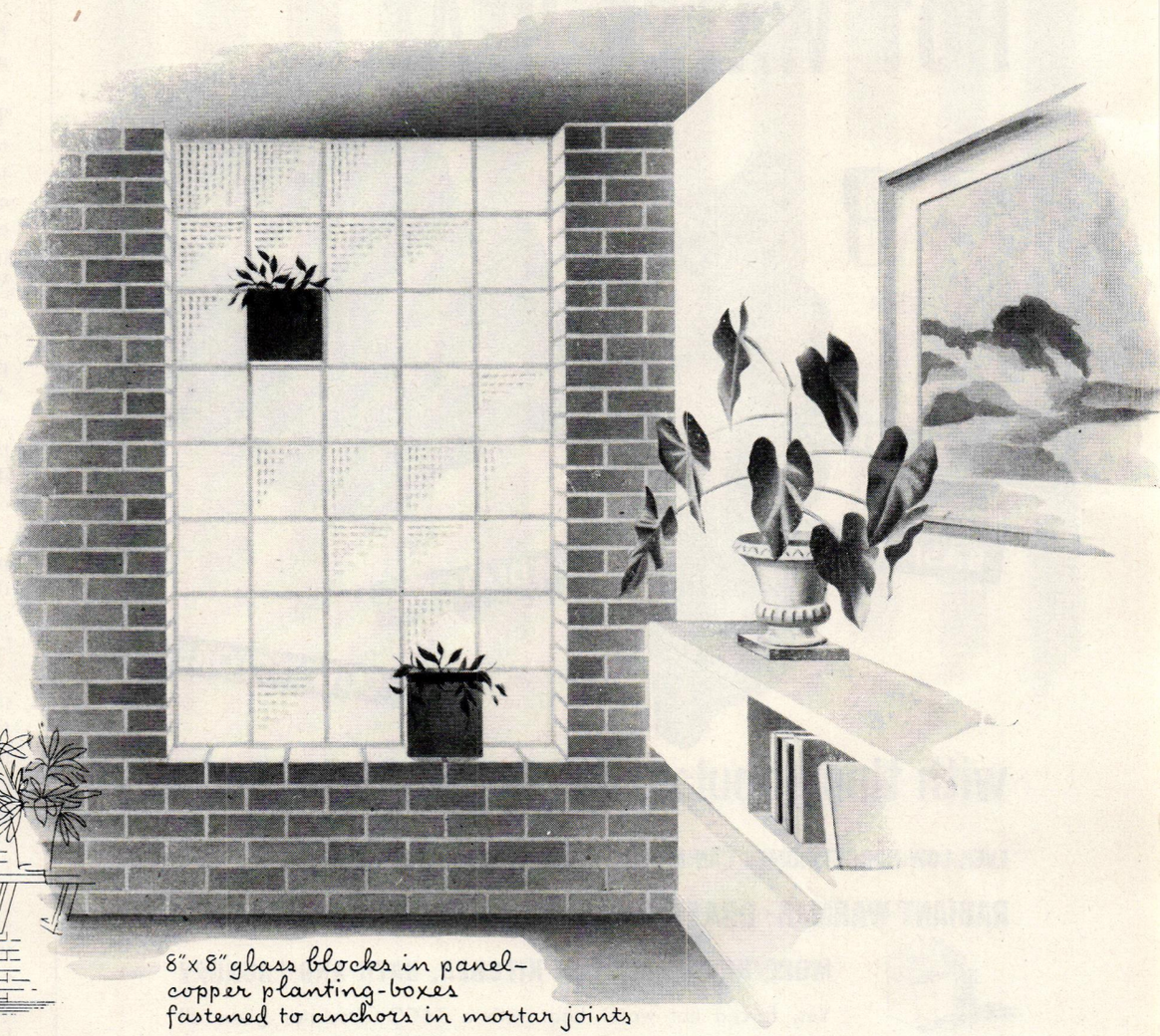
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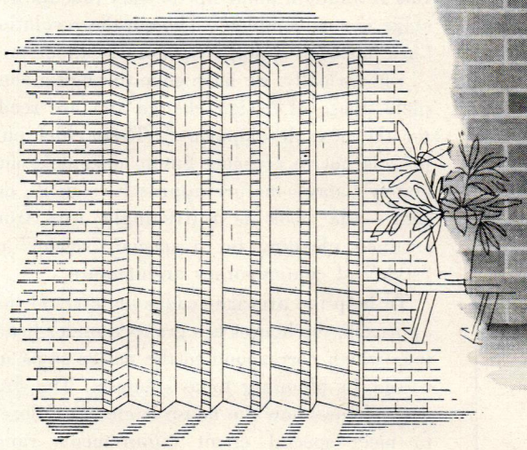
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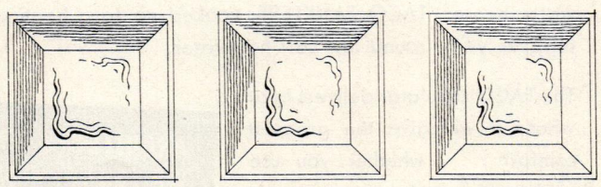
Vertical panels of 8"x8" glass block-staggered in plan with brick vertical "fins" between. ¼" plate glass shelves set in brick joints.



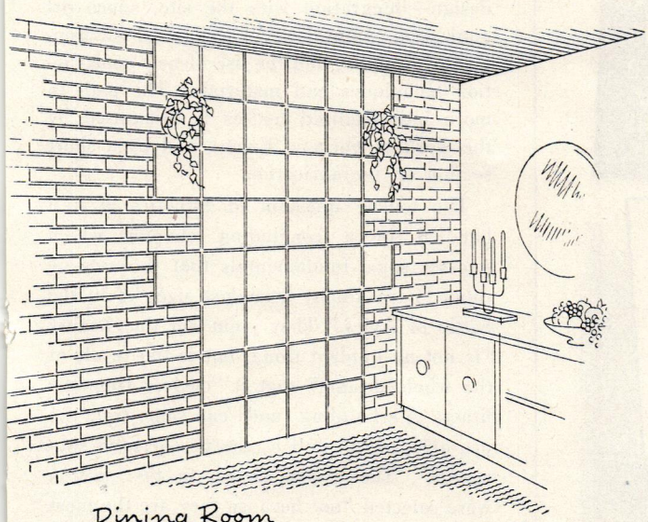
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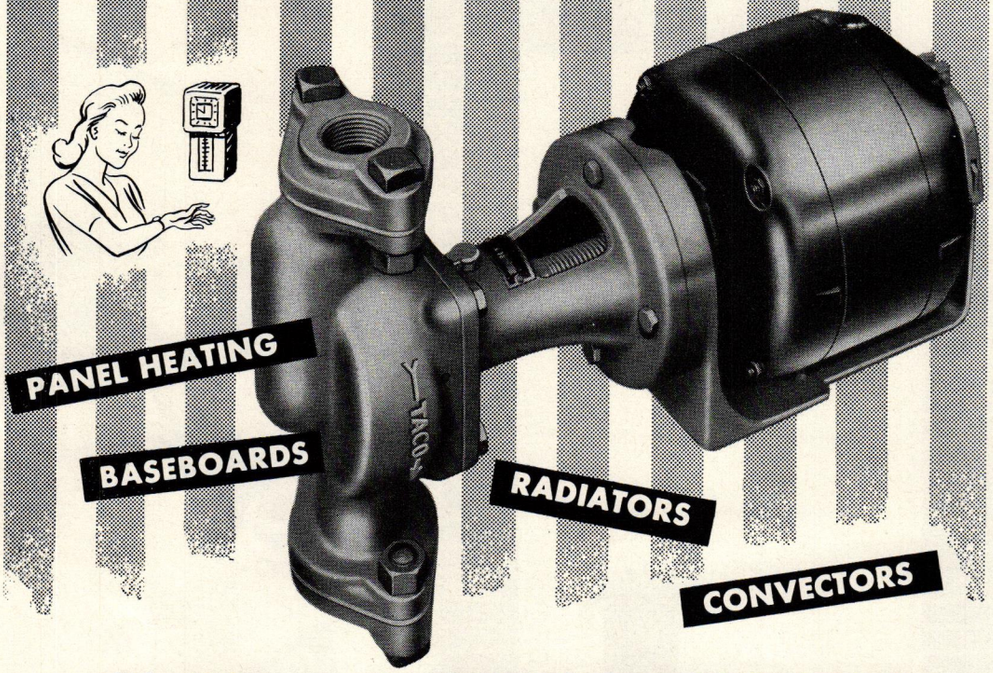
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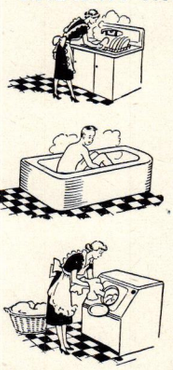
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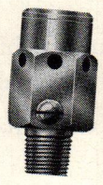
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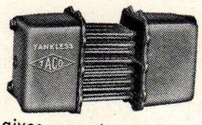
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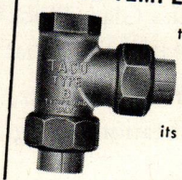
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REVIEWS

THE AMERICAN HOUSE TODAY by Katherine Morrow Ford and Thomas H. Creighton. Reinhold Publishing Corp., New York, N. Y. 239 pp. 8½" x 10½". Illustrated. $7.95.

This panoramic view of contemporary U. S. residential work will appeal to everyone interested in houses. For architects, it provides an opportunity to compare and evaluate 85 examples of some of the best houses produced in every major region of the country since World War II. For the layman, it explains clearly the nature of the "quiet . . . not entirely bloodless revolution" that has taken place in house design over the past decade. And though most of these houses have appeared previously in the architectural press, their assembly into a single volume provides dramatic evidence of the variety and flexibility of today's architecture.

Authors Ford and Creighton, who have long played important journalistic roles in pushing this revolution, point up the fact that its first stage is now complete. Though the revolution "has not been widely or generally understood . . . historically, we have gone through a complete phase of design change and are ready for the next development." Their chief purpose is not to crusade, but to document and clarify today's mature approach to house design — the book is refreshingly free from strained pleading for a special "school" or "style" of contemporary architecture.

To help the average reader understand this approach, the houses are grouped under headings which correspond to the major steps involved in planning today's house. The first group shows how the house is closely tailored to meet special client requirements ranging all the way from those of the merchant builder to those of wealthy hobbyist.

Succeeding chapters focus on houses which are particularly successful in other phases of design—integration with the site, space organization, natural and mechanical environmental controls, and the use of new construction techniques and materials. The path to more industrialized houses is illustrated by the work of Soriano, Eames, and by a short section on prefabrication.

The touchy question of esthetics is well handled in a concluding chapter which stresses some fundamentals that the authors think "have almost been lost sight of in the battle of styles." They point out that beauty "is not an applied thing, but is the result of the whole design," that it "derives from the fitness of a building [and] can come from the use of space as well as the use of solid substance." The houses shown in this section were selected "not because they are the most beautiful in the book; rather because they illustrate trends and tendencies which have become very important in the appearance of the new house."—B. P.

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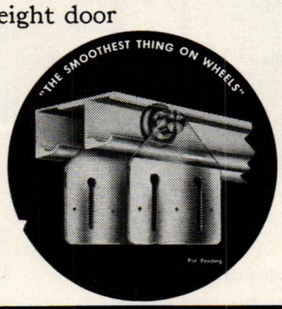


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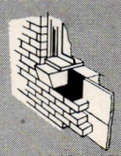
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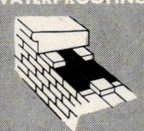
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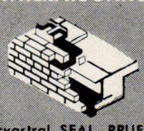
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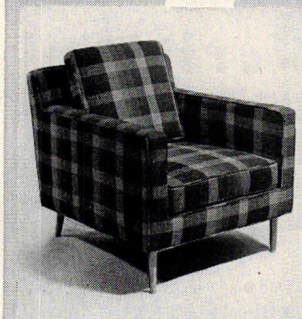
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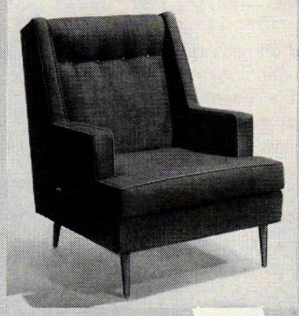


a mere sampling of the too-numerous-to-show upholstered pieces in the important Dunbar collection designed by Edward Wormley

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4731



4971

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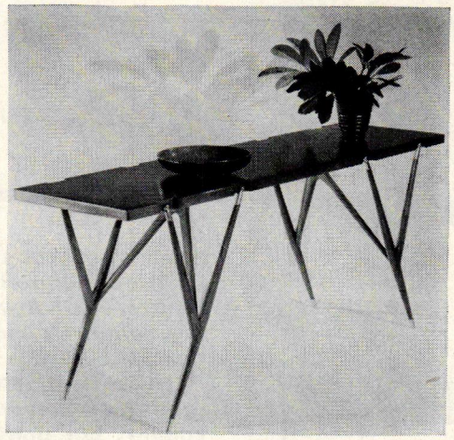
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PRODUCT NEWS

ARCHITECT-DESIGNED furniture. Italian Renaissance on 19th Street



Retailing at $109, the side chair emphasizes its joints by tailored thicks and thins; thrusts its upholstered seat forward comfortably.



Unlike the protective booties on many furniture pieces, the brass fittings on Parisi's tables are essential to the leg form and are echoed above in the cut-out joint to the table top. The table is made in a cocktail height as well as the console (which sells for $244).

There has been little excitement around M. Singer & Sons since the firm made the "modernistic" furniture for New York's Lincoln Hotel back in 1932. (Six years later, disappointed with the antiseptic and pale direction furniture seemed to be taking, the Singers withdrew into an Adam shell.) But this winter, warmed by Mediterranean sunshine, they emerged and sent out invitations (with Michelangelo's pointing arm of God on the cover) to see "Modern by Singer." Whisked through matched families of period furniture under hot lights to a chain of semi-darkened showrooms, members of the press were apprehensive. They need not have been. Even in full light, the new offerings look fresh and exciting. The chairs, desks, tables were new yet familiar. It was not so much that the cabinetwork had a traditional mien, as that the individual pieces resembled the organic furniture which swoops across the pages of *Domus*, Italy's arty shelter book. No coincidence. Four leading Italian architect-designers—Gio Ponti, Carlo Di Carli, Carlo Mollino, and Ico Parisi (plus one American, Bertha Schaefer) had been called in to create a line modified for U. S. taste and rooms. With their warm feeling for grain in wood and understanding of wood as a structural element, the designers had a lesson for metal-tube benders: a spatial feeling can be achieved through sensitive proportions. Di Carli used a sculptured rhythmic frame on his three chairs. Ponti suspended drawers from his console table and desk, put the bulk of his credenza on a set-back stand over the base to let air between the two. Parisi used long brass tips to arrest the wood line of his branch-legged tables.

Of course these are not items for mass production—the careful joints and mellow finish attest to hours of hand labor—but they are a striking rebuff to accusations that all modern furniture is cold, concerned only with rigid geometric forms that can be turned on a lathe, sliced by band saw or pulled through a wire gauge. Here is furniture with grace and style.

Manufacturer: M. Singer & Sons, 36 E. 19th St., New York 3, N. Y.

(Continued on page 138)



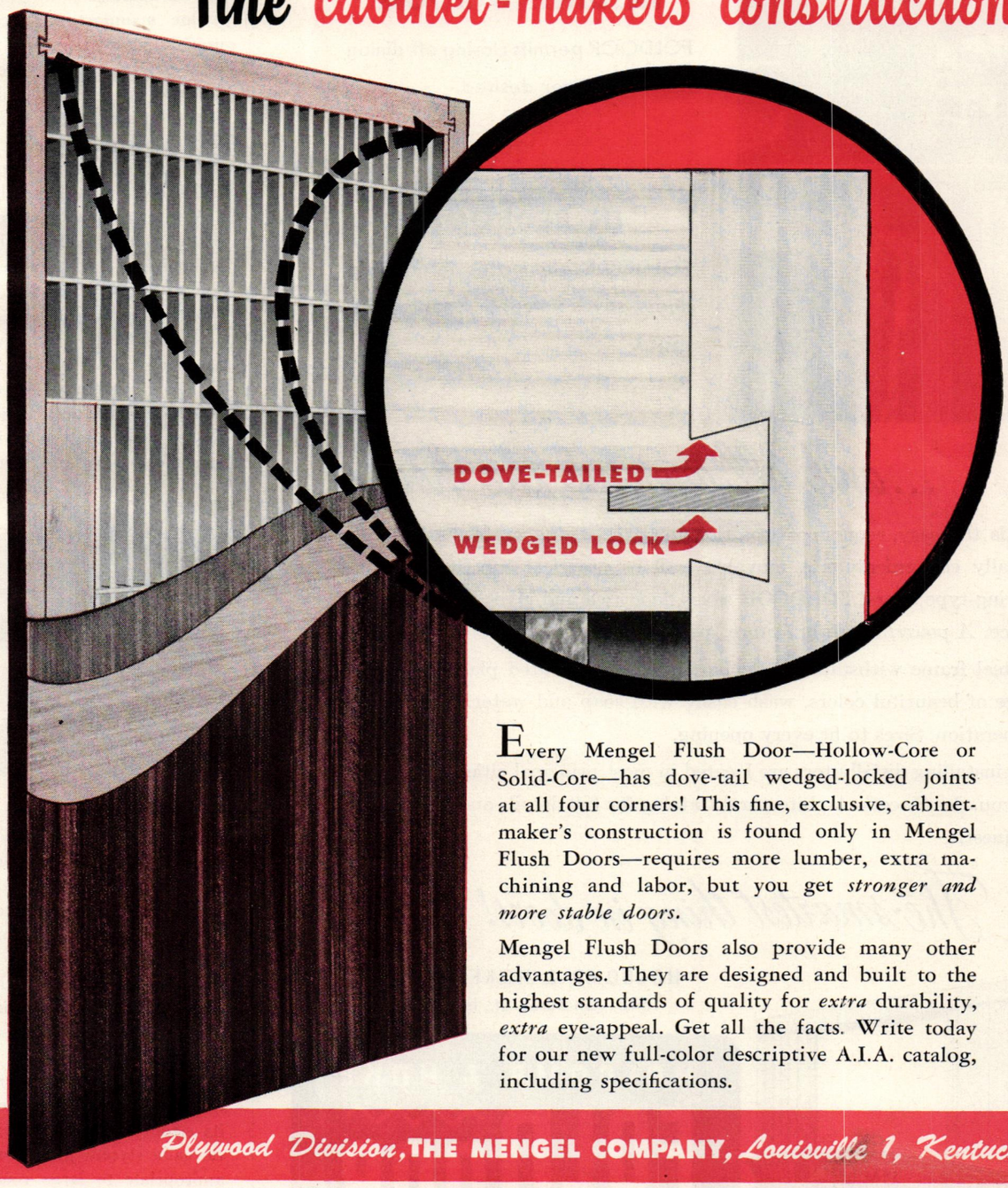
The credenza's cabinets seem to float over the tapered leg base. Behind the doors are shelves and drawer space. The piece costs $693. Like the console at right, its hand grips are concealed. All the above items are constructed of American and Italian walnut. Prices are approximate retail.—M. G.



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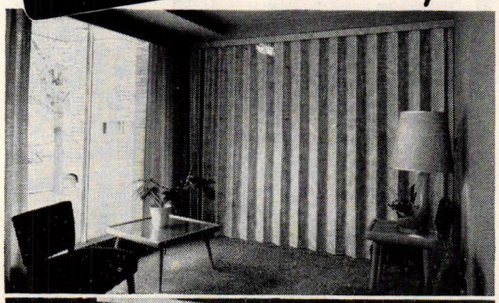
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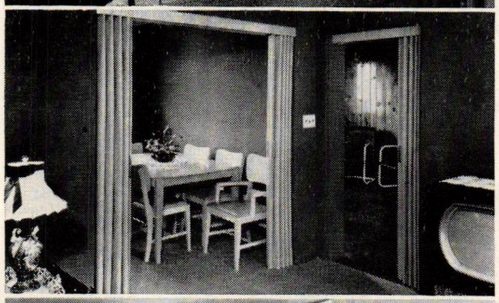
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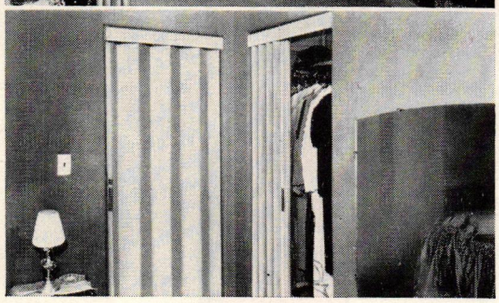
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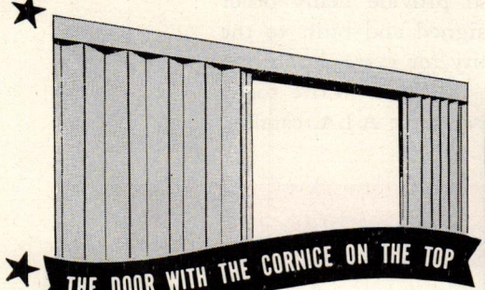
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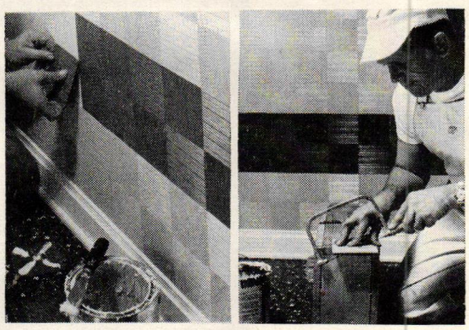
PRODUCT NEWS

NEW PLASTIC TILE boast textured surfaces

At last manufacturers are doing something with plastic tile besides imitating ceramic wall materials, and in the doing have foiled plastic's biggest bug—abrasion. Many homeowners have liked the smooth shiny surface of their plastic-tiled bathrooms and kitchens, and the contractors have found the material easy to install. Both appreciate the money saved by substituting the plastic for porcelain. Unfortunately, although trumpeted as scratch *resistant*, most of the plastic tile on the market is far from scratch *proof* and its glossy surface soon breaks out in an unpleasant patina of wear marks.

One manufacturer recently attempted to provide a surface which would "absorb" any scratches by giving his tile a "brushed grain"; i.e., the smooth surface lightly prescratched either horizontally or vertically. Called *Rib Lock 68*, this tile measures 6″ x 8″ and has a wide beveled edge so that viewed head-on, it looks thicker than it really is.

More successful textures were achieved directly in the injection molding process by two other firms. Nalle Plastics, Inc. gave its 4¼″ square *Deco-tile* a deeply striated surface. The tile may be set with the ribs running up or across the wall or may be alternated in a checkerboard. The ribbed pattern can take abrasion gracefully; scratches get lost. Installation of the new tile is different from that for the smooth bathroom tile; instead of combing adhesive over the entire wall surface, each

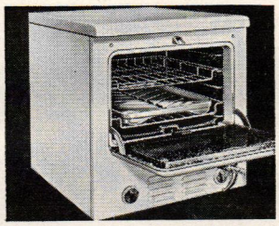


square is dabbed with mastic and pressed into place so none of the binder oozes through the seams. (Not a waterproof system, it is not recommended for use in baths or kitchens.) Retail price, not installed, is about 60¢ per sq. ft. The finished wall may be washed clean, dusted with a brush or vacuumed. Colors, which go beyond the familiar pastels to include a deep blue green and coral, are permanent, and the material is said not to chip, peel, or crack.

Departing still further from the conventional tile, Plastic Engineering Inc. produces its striated ribbed tile named *Deco-block* of the same styrene plastic in a 9″ square, a scale appropriate to large rooms. Like the other two products, *Deco-block* may be cut with a fine saw or tile cutter to fit around door and

(Continued on page 140)





IN-A-WALL Oven is heavily insulated—top, bottom, all sides—utilizing retained heat to "cook with the gas turned off." Its huge, family-size capacity accommodates up to 40 lbs. of roast. Beautifully finished in stainless steel, or stainless front with choice of seven beautiful kitchen decorator colors.



ON-A-TOP 4-burner cooking top can be placed on 27" base cabinet. Top and panels stainless steel. Quickly removable individual drip rings. 8"x27" stainless steel splasher is standard equipment. Drop-in 3-burner also available.

Chambers

COOKS WHILE THE COOK'S AWAY ®

Chambers BUILT-INS have inspired an entirely new concept in small kitchen design. They give architect and builder a new freedom and flexibility in planning kitchen installations, enable them to utilize previously wasted space, and provide work units that can also be used as decorative elements. Also, most leading makes of kitchen cabinets readily accommodate Chambers BUILT-INS. Small kitchens equipped with Chambers BUILT-INS enhance the small home's salability and satisfaction.

Architect, Builder, and Homeowner bet on an all-'round winner, when planning and installing Chambers BUILT-INS. They are accepted by FHA for underwriting loans. They have been selected for Good Design by the Museum of Modern Art. They meet the rigid requirements of the American Gas Association for this type of installation.

The Chambers IN-A-WALL Oven stretches a housewife's budget by its many economies, since it *"cooks with the gas turned off."* It is the finest in AUTOMATIC *waist-hi* gas cooking. It can be fitted into 24 inches of the most convenient wall space, and, because of its complete triple-wall insulation, be surrounded on all sides by wood or metal construction. Similarly, Chambers three-burner and four-burner cooking tops fit easily into or atop counters or cabinets.

Selected GOOD DESIGN by the Museum of Modern Art — 25 YEARS

25 Year Guarantee on burners and cast oven bottom

Originator and Master Builder of Insulated Ranges since 1910

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IN-SINK-ERATOR
ELECTRIC FOOD WASTE DISPOSER



TWO MODELS FIT *Every Installation Need!*

LOOK AT IN-SINK-ERATOR feature by feature and you'll find the disposer value the Builder wants—the disposer design the Architect prefers.

- ☑ **Choice of Two Models—one for every installation need. Offset body can be rotated to adapt IN-SINK-ERATOR to unusual cabinet designs, off-center drains and shelf requirements.**
- ☑ **Automatic Reversing Action for longer life and greater efficiency.**
- ☑ **Continuous Feed for greater operating convenience.**
- ☑ **Two-Way Cleansing assures complete sanitation.**
- ☑ **Proven Dependability—task-tested in home use since 1938.**

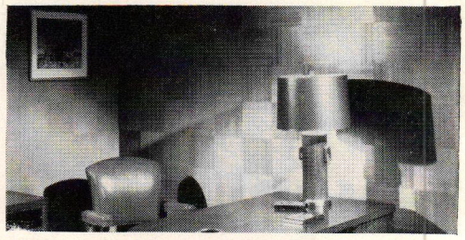
EASY TO INSTALL—simplicity of design permits easy, economical installation. No special tools or training required.

EASY TO SERVICE—built-in features overcome minor operational difficulties and minimize need for outside service.

SEE SWEET'S 7a/in BUILDERS, 24a/in ARCHITECTURAL FILE—or write for data and prices

IN-SINK-ERATOR MANUFACTURING COMPANY
1213 Fourteenth Street • Racine, Wisconsin
World's Oldest and Largest Exclusive Manufacturer of Food Waste Disposers

PRODUCT NEWS



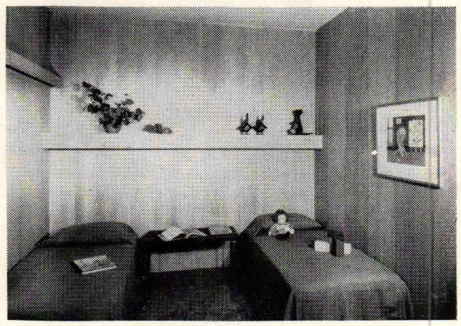
window openings and electrical outlets. While the parallel ribbed surfaces of *Deco-tile* and *Deco-block* smack faintly of simulating sand-blasted wood, they are nevertheless textures, and as such, fuller exploitations of plastic's potential as a wall covering than the building industry has seen to date.

Manufacturers: Rib Lock 68—The Detroit Plastic Tile Co., 21950 Wyoming Ave., Detroit 20, Mich. *Deco-Tile*—Nalle Plastics, Inc., Austin, Tex. *Deco-Block*—Plastic Engineering Inc., 8506 Lake Ave., Cleveland, Ohio.

PREFINISHED WOOD WALL PANELING.
Luxury material for budget-built home

Marketed primarily for the zealous do-it-yourself crowd of young homeowners, Plankweld plywood panels nonetheless hold several attractions for professional builders:

▸ Beautifully veneered in birch, Philippine mahogany, oak and knotty pine, the panels are factory finished with a satin-like lacquer and given a coat of wax to protect them during handling. Once attached to the wall, they require no further attention or coatings. (To



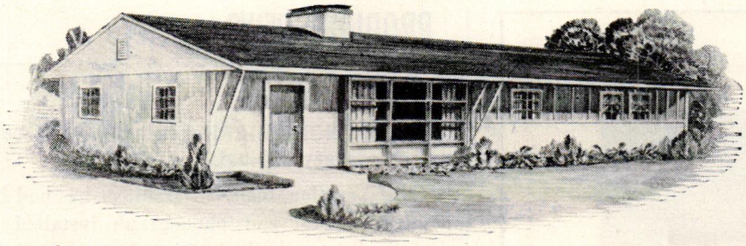
keep the finish fresh, the home-owner is advised to wax the surface about twice a year.)

▸ Installation, planned for the amateur, could not be much simpler. The ¼″ thick panels measure 16¼″ wide for spacing over studs, and are grooved along the long edge so that they overlap slightly and mask the metal nailing clip supplied with the paneling.

▸ Total cost, figuring the labor time saved on the job, compares favorably even with gypsum board. Plankweld sells for about 67¢ per sq. ft. in oak; about 55¢ per sq. ft. for the other finishes, and is packaged in cartons of 10 panels conveniently precut in lengths of 6′, 7′ and 8′. In rooms slightly higher than 8′, ceiling and base moldings can make up the difference. The panels may be butted to a solid hardwood lumber base or the trim can be made from waste strips of Plankweld.

Manufacturer: U. S. Plywood Corp., Weldwood Bldg., 55 W. 44 St., New York 18, N. Y.

(Continued on page 142)



Coronado with Window Wall

the answer for '52

only a gunnison dealership offers you so much

interim financing . . . The Gunnison Plan of Interim Financing includes the complete cost of the Home Package, plus additional cash. This plan is available to all qualified Gunnison Dealers.

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quality, strength and durability . . . Quality is there for all to see. Strength and durability have been proven throughout the last seventeen years as the Homes have withstood the ravages of time, flood, weather and fire.

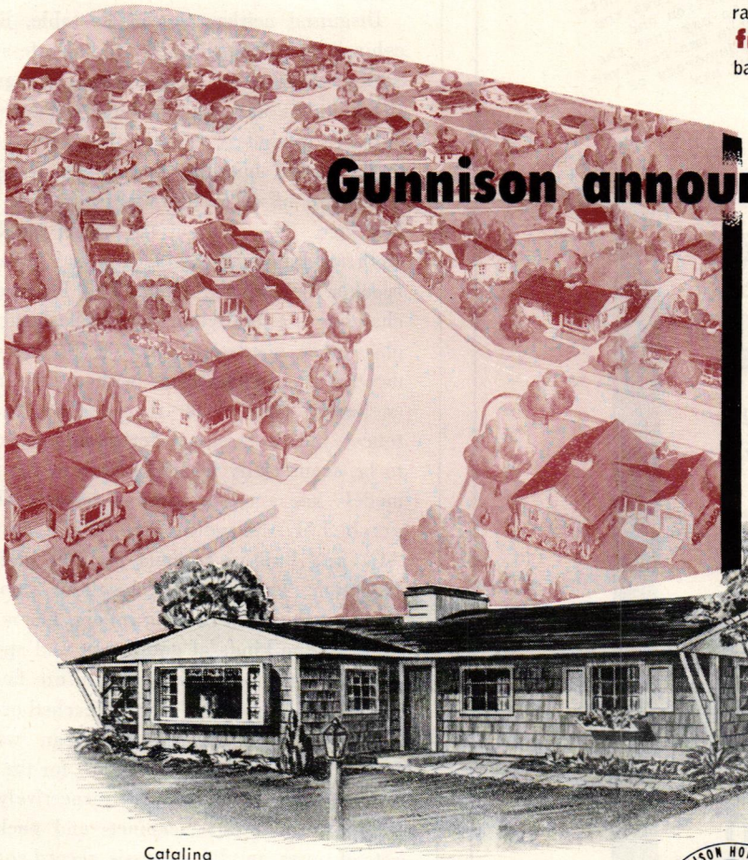
wood paneled interiors . . . All Gunnison interiors are in Wood Paneling with the famous Mellow-Tone finish. This means no costly delays due to labor and material shortages. An Owner of a Gunnison Home is presented with luxurious interiors which are dignified in their beauty and trouble free in their maintenance.

technical assistance . . . A complete liaison is maintained between the Gunnison Dealer and Gunnison Homes, Inc. The vast facilities of the entire Gunnison Organization are available where and when you need them.

prompt delivery . . . Regardless of your requirements for Home Packages, you know that you have but to pick up a telephone or drop an order in the mail to obtain rapid delivery. By the time you get your foundations ready the Homes will be there.

rail or truck shipment . . . Gunnison Dealers have their choice of rail, or truck shipments delivered to their building site.

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Catalina

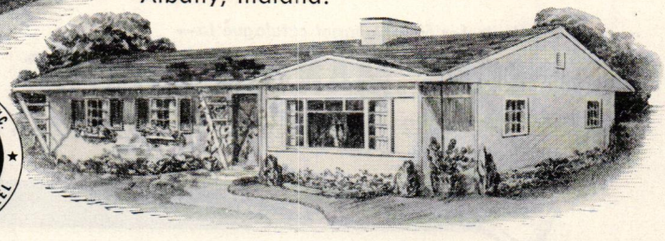
Gunnison announces an "L" shaped home!

Out of tomorrow, GUNNISON brings you their latest . . . the *Catalina* . . . to take its place along side the new '52 series of Coronado and Champion Homes! All GUNNISON HOMES are designed to sell in the $7,000 to $12,000 price range . . . America's mass market!

Fresh design and expert planning make all GUNNISON HOMES ideal for project building . . . many elevations, models and floor plans . . . and the only "L" SHAPED home in its price range! These homes feature Quick Erection, High Quality and Strength! They are delivered to the building site complete, except for plumbing, wiring and masonry work.

Here are the homes of tomorrow — your's to sell today! Sell the best — sell GUNNISON!

Investigate the possibility of including GUNNISON HOMES in your building program! For more complete information, write Dept. F 12, GUNNISON HOMES, Inc., New Albany, Indiana.



Coronado with Window Bay

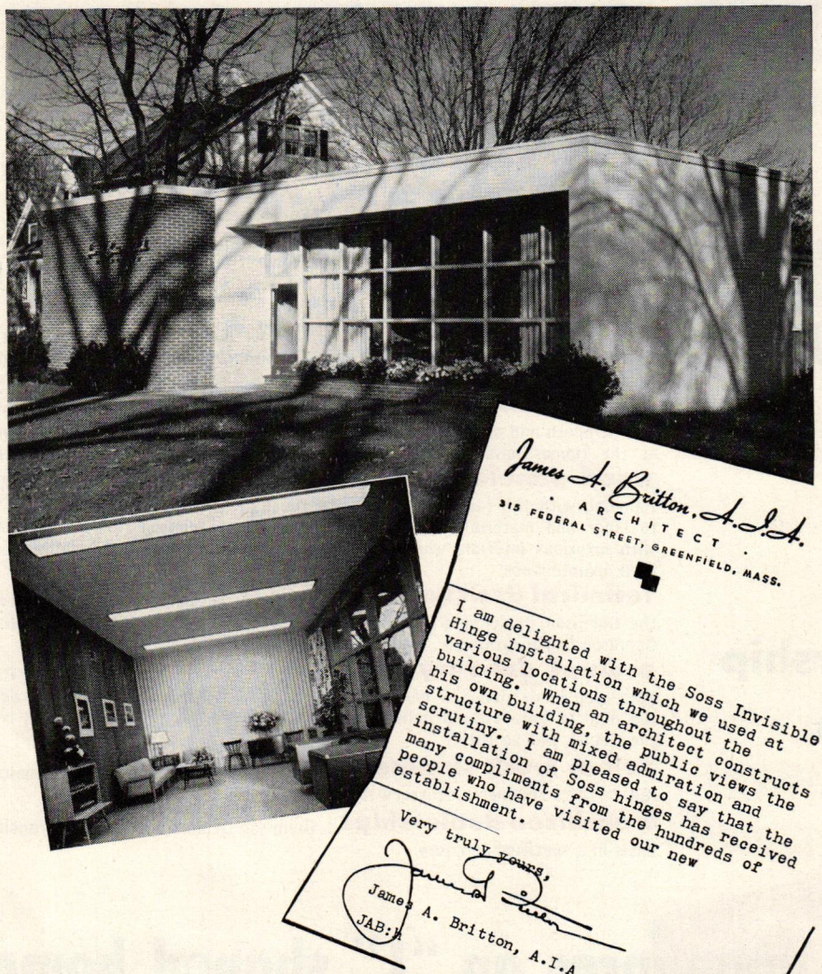
Gunnison Homes INC.

UNITED STATES STEEL (USS) CORPORATION SUBSIDIARY

NEW ALBANY, INDIANA

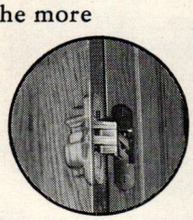
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THE SOSS INVISIBLE HINGE is *the* hinge that has no ugly, protruding hinge butt. It lets architects fulfill the demands of modern design for flush, smooth, streamlined interiors. You will find SOSS hinges ideal for all types of doors, wall panels and cupboards . . . in every type building! The more you use this beautifying hinge the more compliments you, too, will receive on your good taste in modern design.



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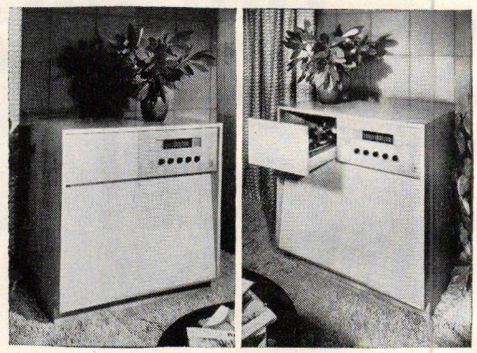
21779½ Hoover Road, Detroit 13, Mich.
Dept. 1

SEE OUR CATALOG IN SWEET'S

PRODUCT NEWS

RADIO-PHONOGRAPH housed in neat contemporary cabinet

In desperation, many an architect has had his client's radio and phonograph installed in costly custom-built housing because of the scarcity of well designed ready-made cabinets with quality equipment. Around Chicago, Irving Rose of Voice and Vision, Inc. has handled many of the architect-specified jobs, and realizing the field was wide open, also has assembled sets of excellent audio-reproducing



units and put them inside sleek casings which he felt would stand comfortably in most contemporary interiors.

Disguised neither as console table, liquor cabinet or Murphy bed, the Professional Series model is an honest radio-phonograph. Black knobs and dial, in bold evidence, not only are reminders that this is an instrument to be played but also serve as a deliberate decorative offset to the square (38″ x 38″) box face. The slope of the woven pandanus cloth masking suggests the upward tilt of the speaker behind the cloth. The loudspeaker chamber is a totally enclosed baffle lined with glass fiber insulation. One of the few commercial r-p combinations with a bass reflex enclosure (for clean reproduction of low tones) the Professional Series cabinet is said to be acoustically faithful. Each of the three models has a triple speed automatic phonograph, FM/AM radio (105—125 V. 60 cycle AC) and built-in antenna for FM and AM reception. The phonograph glides smoothly on heavy duty ball bearing rollers. The models differ in the kinds of equipment and speaker sizes. Cabinets are the same and are finished in natural or ebonized birch, bleached or dark mahogany, and natural American walnut. Prices are $556, $700 and $1,000 for the fully assembled Series 1, 2 and 3 respectively.

For the ambitious, cabinets and packaged sets of tuner, amplifier chassis, record changer and speaker are available separately for installation on the job at considerable savings. The complete components for a Series 1 unit cost $468.71; the cabinet alone is $219.50.

Manufacturer: Voice and Vision, Inc., 314 N. Michigan Ave., Chicago 1, Ill.

(Technical Publications on page 144)

DUR-O-WAL TRUSSED Design

Now Available in Greater Supply!

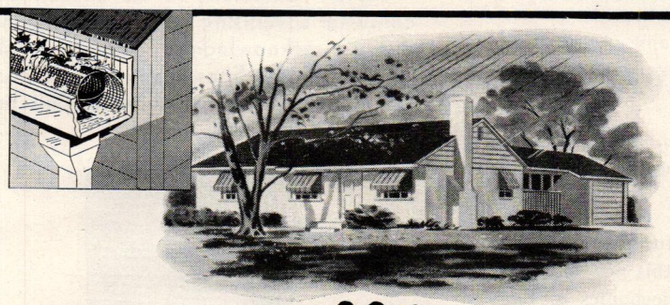
Improved delivery schedules are now being maintained in the shipment of patented Dur-O-waL... the trussed design reinforcing member which gives masonry walls a backbone of steel.



Masonry walls reinforced with patented Dur-O-waL are built for lasting performance. Trussed design means permanent beauty, scientifically designed protection from cracks. Lays fast, economical, ideal for all masonry construction.

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Dur-O-waL Products, Inc.
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Now only 29.40* will protect your home

Invest $29.40 in Rain-L-Flo Gutter Tube, protect your home from leaf-clogged gutters, and overflow damage to walls and paint. Protect yourself from messy gutter cleaning jobs and dangerous rooftop climbing. Protect your budget from costly gutter replacements, extra paint jobs and wall repairs. Made of a 3-inch diameter tube with internal support brass spring. Rain-L-Flo is easily and quickly installed without special tools.

*Approximately 60 feet of RAIN-L-FLO Gutter Tube will protect the average small home.



WYNNCO PRODUCTS CORP.
344 Luckie St., Dept. W-32, Atlanta, Ga.

☐ Please send complete information about Rain-L-Flo Gutter Tube.
☐ Please rush _____ ft. Rain-L-Flo Gutter Tube at 49¢ ft., express prepaid.*
Enclosed find ☐ check ☐ money order for $_____ as payment in full or ¼ with order, bal. C.O.D. *Orders of 60 ft. or more.

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To help you build a better home...



Permalite makes plaster 4 WAYS BETTER!

That's right... Permalite aggregate means a better house... extra value for the money. In base coat plaster, it provides: (1) Three times greater insulation than ordinary plaster; (2) Extra fire resistance; (3) More resilience, more crack-resistance; (4) Tons less dead weight for minimum settling and maintenance.

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Send in this coupon today for full details. Learn how *you* can add much to housing quality, little to housing cost with Permalite.

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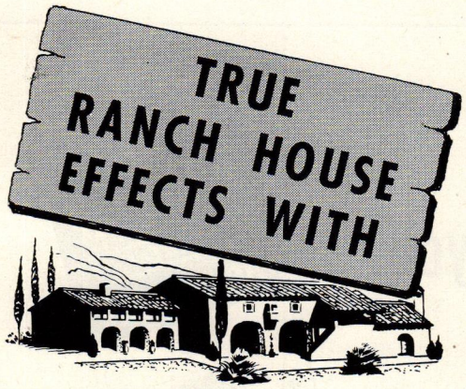
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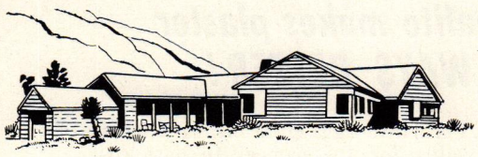
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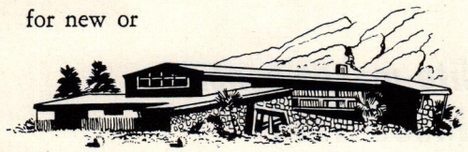


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Give your ranch house construction that final touch of authenticity — the soft, flat pastel shades that come only in Cabot's Ranch House Hues.



Faithfully reproduced from the old Spanish West, Cabot's Ranch House Hues have appealing beauty. They're excellent for new or



weathered redwood, pine, fir, cedar, Philippine mahogany and other woods. Have effective hiding power and show the attractive texture of exterior woodwork, siding, shingles, clapboards.

WRITE TODAY for color card showing new Ranch House Hues, available from no other source in Salinas Fawn, Mimosa Yellow, Sombrero Buff, Sagebrush Gray, Hacienda Gray, El Capitan Gray, Sequoia Red and Pipestone Red.

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TECHNICAL PUBLICATIONS

WIRING. Home Wiring Estimator, Booklet SA-6815. Better Homes Bureau, Westinghouse Electric Corp., Box 2099, Pittsburgh 30, Pa. 25¢.

Taking the job of estimating residential wiring off the back of an envelope, Westinghouse's recent booklet contains 25 step-by-step work sheets for figuring every detail of an adequate electrical system. Starting logically with branch circuit requirements, the sheets contain provisions for computing the loads for general lighting, general purpose, small appliances, and major appliances which take special wiring. The forms not only can affect material and cost savings through accurate estimates but also provide an intelligible means of showing the prospective purchaser just what wiring is needed and why.

PAINTING. Building Guide for Good House Painting. West Coast Lumbermen's Assn., 1410 S.W. Morrison St., Portland 5, Ore. 12 pp. 8½ x 11".

Most paint failures can be prevented, this guide suggests, by following the construction suggestions it outlines. Prepared to help assure the homeowner of a good, durable paint job, the booklet is illustrated with several drawings which detail methods of preventing excess moisture from accumulating inside the walls—the most prevalent cause of paint blisters and peeling. The publication also recommends using a reputable paint, noting that "cheap paint is rarely a bargain."

HEATING. The Weather-Flo. Automatic Devices Co., Inc., Western Springs, Ill. 4 pp. 8½ x 11".

An indoor-outdoor temperature control, the Weather-Flo is described in this new bulletin. Explained briefly are the mechanics of this control which anticipates weather changes and adjusts the heat input accordingly. The reader is told how to adjust the device when installing it, and how to make any necessary changes, without elaborate engineering calculations.

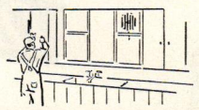
PLUMBING. Septic Tanks — Their Use in Sewage Disposal. Housing Research Paper 18. Housing & Home Finance Agency. For sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 16 pp. 8 x 10". 15¢.

Efficient design and operating of individual household sewage disposal systems are outlined in this paper which summarizes one phase of research currently undertaken by the HHFA in co-operation with the U. S. Public Health Service. The findings include information on septic tank compartmentation, outlets, percolation test methods, absorption systems, and soil clogging effects of tank effluents.

(Continued on page 146)



NEW CONSTRUCTION



OR REMODELING WORK

(and who can safely predict which will be more important in 1952?)

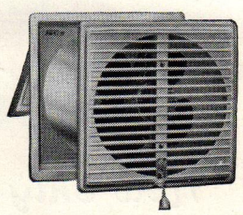
FASCO VENTILATORS

make either kind of job easier to sell

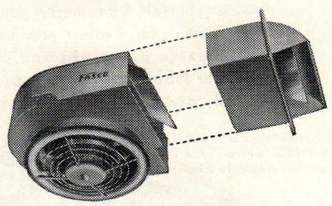
In new-home promotion, Fasco Ventilators are one of the perfect "extra touches" which make house-hunters, especially women, decide on *your* homes against others lacking such conveniences.

In remodeling work, your customer's mind is already set on modernization—and it takes only a suggestion to add Fasco Ventilators, too—for extra profit on the job.

Fasco Ventilators, to be backed by consumer advertising in 1952, are the industry's acknowledged leaders. Ask famous Levitt & Sons or any builder who has installed them—or write for Bulletin MB 45. You be the judge!



FASCO
WALL VENTILATOR, 8-inch or 10-inch ideal for outside walls



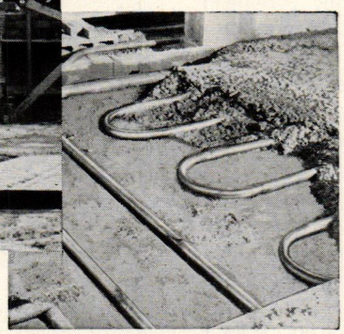
FASCO
"CEIL-N-WALL" VENTILATOR, 10-inch best for duct installation

formerly F. A. SMITH MFG. CO., INC.
FASCO Industries, Inc.
ROCHESTER 2, N. Y.

WARM DRY ON-THE-GROUND CONCRETE FLOORS



(Below)
Details of radiant heat installation with Zonolite concrete.



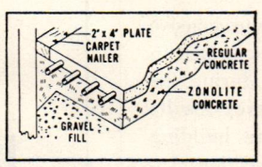
(Above)
Pouring a regular Zonolite concrete floor.

ZONOLITE* Self-Insulating Floors

✔ **Prevent Condensation!** ✔ **Block Heat Loss!**
✔ **Minimize Heat Lag!**

No more problems with cold, clammy on-the-ground floors when Zonolite vermiculite replaces the usual sand and gravel in concrete. Self-insulating Zonolite concrete floors prevent condensation—block loss of heat into the earth, and by minimizing heat lag, permit more accurate and immediate response to thermostatic control.

These natural qualities make Zonolite concrete an ideal base for radiant heat pipes. As much as 17.5° difference in soil temperatures has been noted beneath a non-insulated concrete slab and a slab of Zonolite concrete—proof of Zonolite's ability to keep heat in.



Typical use of Zonolite insulating concrete with radiant heating coils.

Construction details and other data on various applications of Zonolite concrete are available without cost to architects and builders. Mail the coupon today.

ZONOLITE COMPANY
135 South LaSalle Street
Chicago 3, Illinois

ZONOLITE BRAND VERMICULITE INSULATION

Zonolite Co., Dept. MBL-22
135 S. LaSalle St., Chicago 3, Ill.
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Seldom has a service been so enthusiastically received by all parties concerned as has the Plan of "Home-Security." Perhaps the basic reason for this quick and complete acceptance is that the *name* and the *aim* are the *same* — "Home-Security" means EXACTLY the security of the independent *home!*

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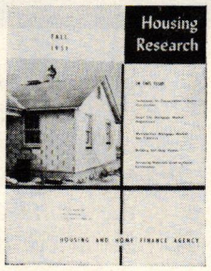
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TECHNICAL PUBLICATIONS

HOUSING. Housing Research. House & Home Finance Agency. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 51 pp. 8 x 10″. 30¢.

From baby care to fish lures, the quality and scope of information in government publications are quietly becoming legendary. In the building field, the technical bulletins put out by the Housing & Home Finance Agency are regarded with near-reverence. Now HHFA has transcended its own excellent standard with a new quarterly. Supplanting the bulletins, the periodical —a slick paper, illustrated book — contains summaries of progress reports on projects conducted by the agency. It will receive wider distribution than the complete reports (which are available separately to those desiring more complete data.)



Going the purely technological *HHFA Technical Bulletin* one better, the new publication includes developments in the social sciences as they affect housing, and in its first issue dunks a toe into sociology in the article "Building Self-Help Homes," the story of how Tuskegee, Ala. low-income families who live in shacks of tar paper or equivalent are being taught to build decent homes with plentiful, cheap, local materials.

Another article, "Techniques for Conservation in Home Construction," deals with current research in plumbing, framing and modular co-ordination — materials-saving projects directly related to the defense mobilization program.

The first attempt to make a comprehensive computation of *all* the materials contained in *all* U. S. one-family houses built during the first half of 1950, and how the survey results are being used to calculate future building needs, are summarized in another section. Analyses of the small city and metropolitan mortgage markets are covered in two short articles, and the booklet is rounded out with notes on new HHFA research contracts and a useful list of publications. As government literature—or any other kind of research literature—*Housing Research* is a gem.

LUMBER. Sugar Pine. Western Pine Assn., 510 Yeon Bldg., Portland 4, Ore. 52 pp. 8½ x 11″.

The character, uses and grades of sugar pine, the largest of all pines, are described in this booklet. The sixth in a series (which has covered Idaho white pine, ponderosa pine, Douglas fir, white fir, and larch), the publication outlines the physical properties of the wood, and lists many construction applications. Full page photographs of 11 typical grades and an analysis of each example are included.

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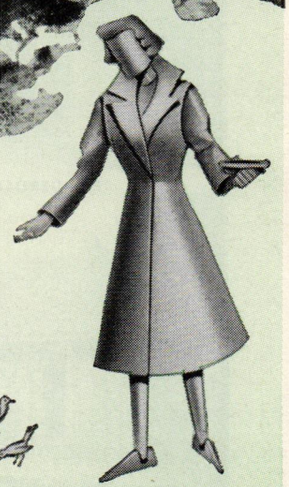
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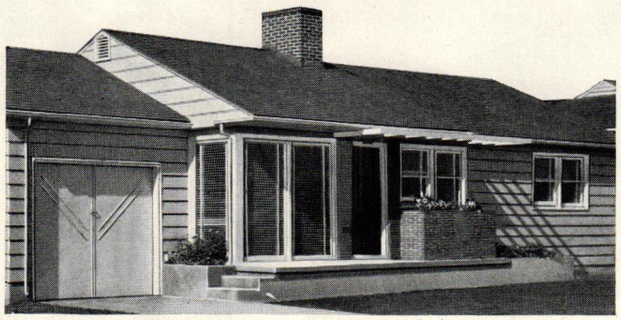
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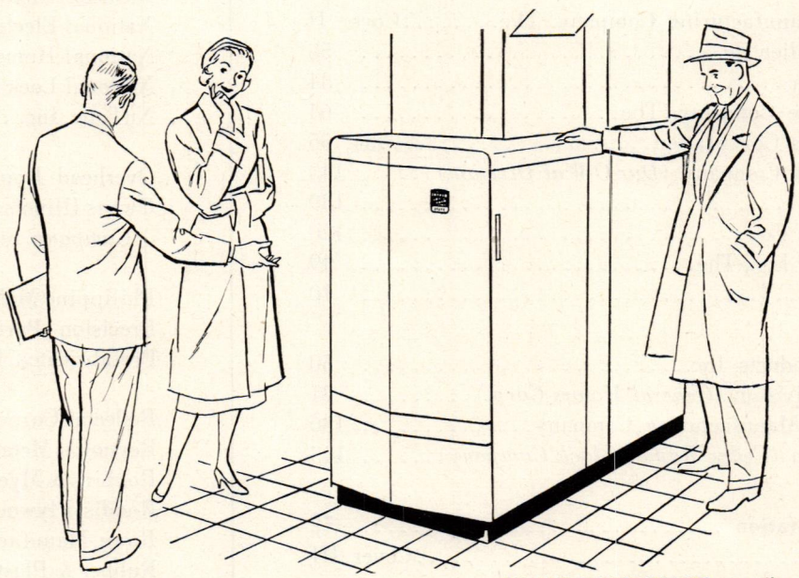
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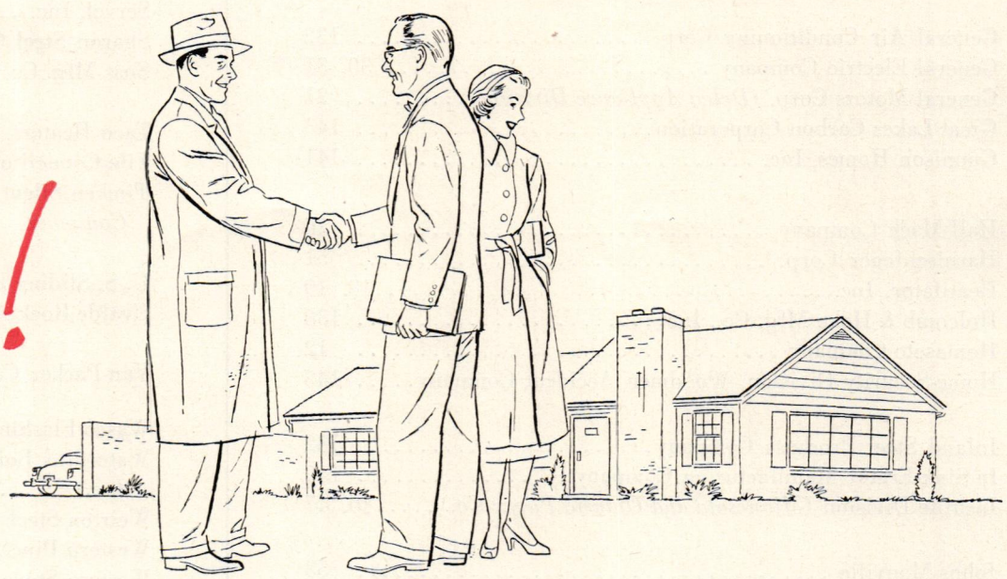
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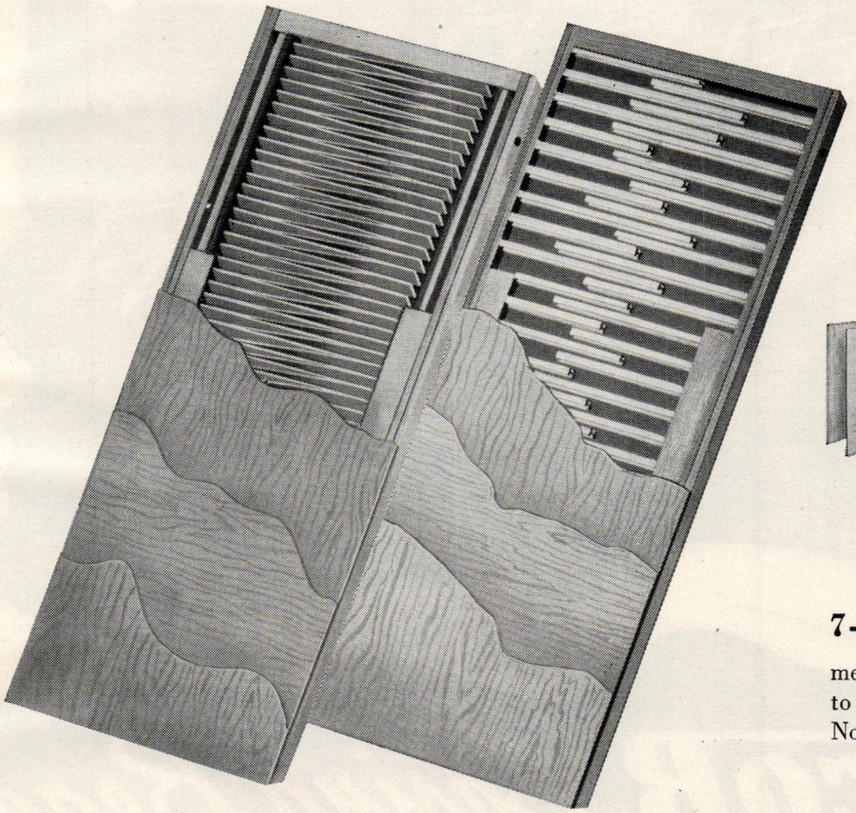
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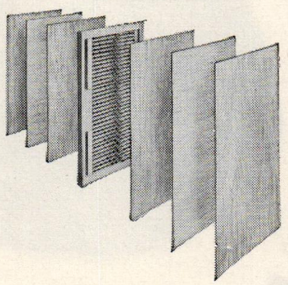
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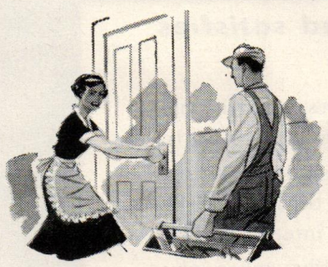




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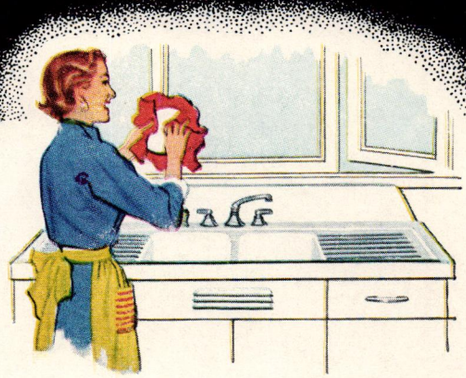


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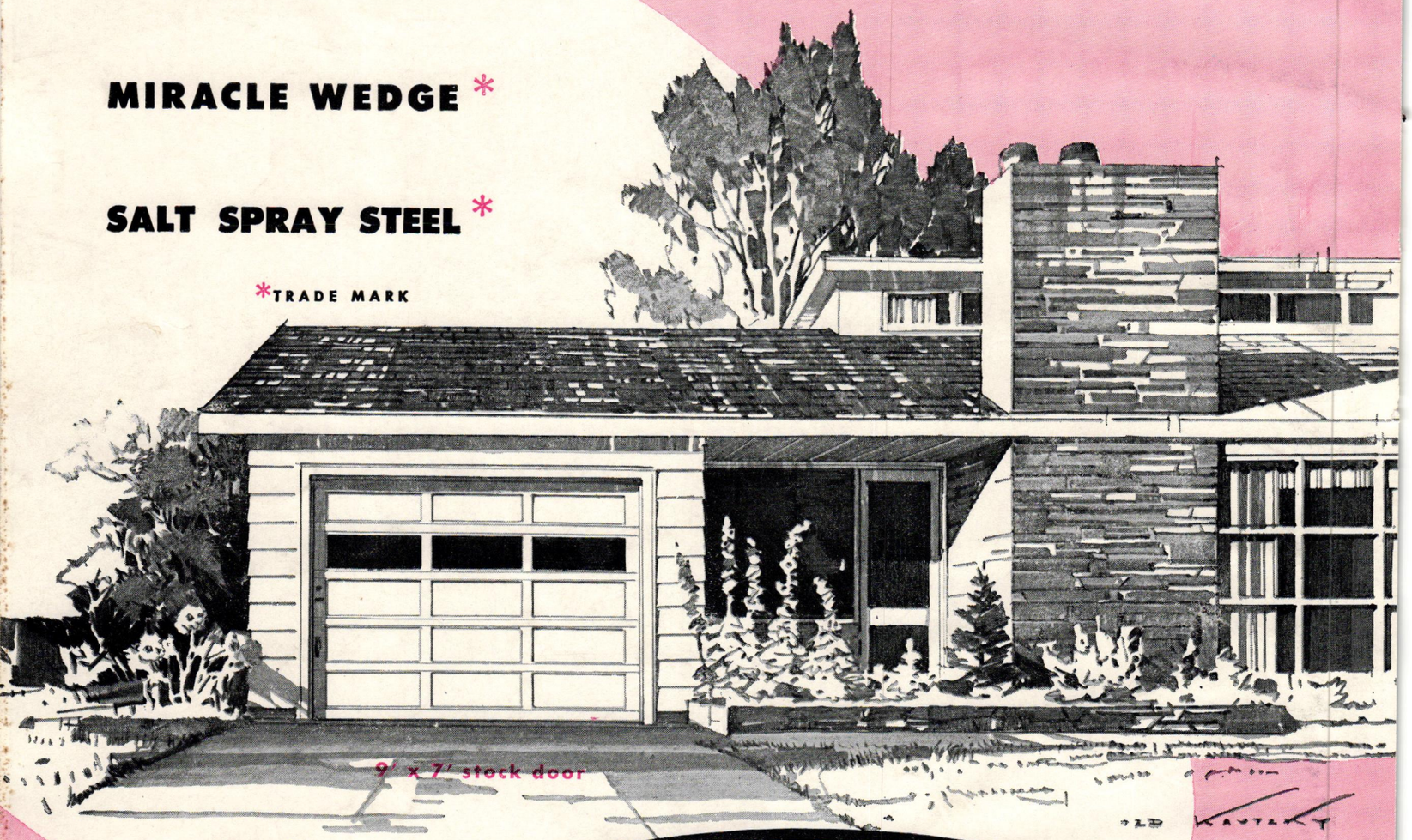
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